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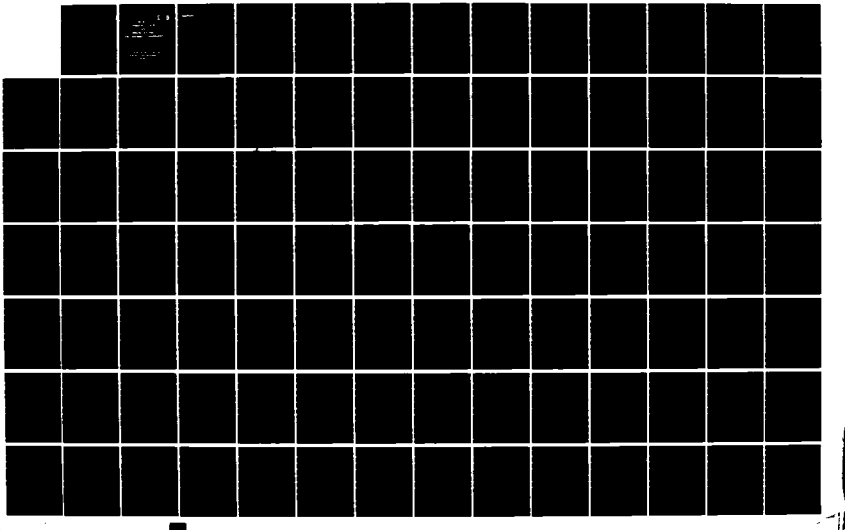

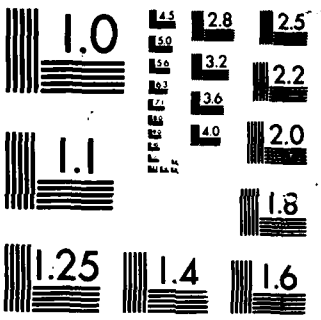

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MOBILITY COMMAND, CONTROL, AND COMMUNICATIONS (C^3) PROGRAMMATIC SUMMARIES

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These programmatic summaries have been developed for the Mobility Office of the Under Secretary of Defense, Research and Engineering. The subject of each programmatic summary is a portion of the overall strategic mobility command, control, and communications (C^3) effort of the Department of Defense. Each programmatic summary provides a description of the project, the project objectives, identifies the proponent and sponsor, identifies and briefly describes related systems, provides a schedule of major events, identifies points of contact, funding information, and identifies reference documents. In addition, where related systems are identified an information sheet with a description of the system is attached to the fact sheet. A glossary of acronyms is provided.

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PROGRAMMATIC SUMMARIES

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INTRODUCTION

These programmatic summaries have been developed for the Mobility Office of the Under Secretary of Defense, Research and Engineering. The subject of each programmatic summary is a portion of the overall strategic mobility command, control, and communications (C^3) effort of the Department of Defense. Each programmatic summary provides a description of the project, the project objectives, identifies the proponent and sponsor, identifies and briefly describes related systems, provides a schedule of major events, identifies points of contact, funding information, and identifies reference documents. In addition, where related systems are identified an information sheet with a description of the system is attached to the fact sheet. A glossary of acronyms is provided.

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JOINT DEPLOYMENT SYSTEM (JDS)

1. DESCRIPTION

The JDS consists of the personnel, procedures, directives, communications systems, and automatic data processing systems required to directly support strategic deployment time-sensitive planning and execution and to complement peacetime deliberate planning of deployment. It supports the overall Worldwide Military Command and Control System (WWMCCS) strategic deployment planning process, providing an integrated joint deployment management information system which assists the Joint Chiefs of Staff (JCS), Supported Commanders, and the remainder of the Joint Deployment Community (JDC) in strategic deployment planning, execution, and monitoring. Eventually, the JDS and the Joint Operation Planning System (JOPS), which establishes the policies and procedures for planning and executing strategic military deployments, will be integrated to become the Joint Operation Planning and Execution System (JOPES).

The JDS is built around a centralized integrated deployment master data base established and maintained in the Joint Deployment Agency (JDA) WWMCCS computer system (dual DPS-8 Honeywell central processing units (CPUs) plus ancillary equipment). In its complete form, the JDS data base consists of refined Time-Phased Force and Deployment Data (TPFDD) files and movement tables. A TPFDD file contains time-phased force and transportation data for an operations plan (OPLAN) including: units to be employed, units to be deployed in support of the OPLAN with an assigned arrival priority, routing of forces to be deployed, mobility data associated with deploying forces, nonunit-related personnel and resupply movements, and estimates of transportation requirements. Movement tables are tables prepared by the Transportation Operating Agencies (TOAs) for each force requirement and each nonunit-related cargo or personnel increment of the

TPFDD concerning the scheduled movement from the origin or port of embarkation (POE), intermediate location, and port of debarkation (POD) or destination. In addition to the JDS master data base, distributed data bases at designated WWMCCS sites are incorporated into the JDS through real-time, transaction-oriented, distributed processing. These distributed data bases are subsets of the JDS master data base and support the deployment responsibilities of that site. The principal function of the current JDS is information coordination among members of the JDC.

Because of the dispersed geographic location of the various distributed data bases, their users, and their command unique WWMCCS computer assets, the JDS relies heavily on the WWMCCS Intercomputer Network (WIN) for data transfer. Each JDS site maintains the currency of data for which it is responsible. As an update is made at a local data base, the JDS automatically generates update transactions throughout the system. This new data is received by other JDS sites in a matter of seconds. Sites which currently have all or a portion of the JDS data base include the following: USPACOM, MAC, HQ Air Force, HQ Army, NMCC, MTMC, USREDCOM, JDA, USAREUR, USEUCOM, US Forces Korea, USAFE, TAC, USLANTCOM, USNAVEUR, USPACAF, and the Air Force Logistics Command. The Chief of Naval Operations (CNO) will receive the JDS data base at a future date.

The second method of data transfer, via the WIN File Transfer Service (FTS), provides bulk data transfer capability for automated interface with command unique application systems such as MAC's FLOGEN.

AUTODIN is used to transmit automated schedule messages to installations of deploying units. It also provides a backup means for using text formatted messages to update the JDS data base when primary update means are not available.

As the JDS evolves, its information coordinating role will include crisis action planning via the No-Plan System (NPS). The NPS will support

timely development of transportation feasible Time-Phased Force and Deployment Data (TPFDD) for situations where no OPLAN exists or existing OPLANs must be modified. The NPS will consist primarily of the Force Module files and the Mode Optimization and Delivery Estimation System (MODES) model. The Force Module files will contain data on a grouping of combat, combat support, and combat service support and sustainment forces linked together or uniquely identified so that they may be extracted or adjusted as a single entity, thus, facilitating planning. The MODES model will function as a transportation feasibility estimator, supporting rapid evaluation of courses of action. MODES will draw upon data from the Force Module files and other sources.

Although the JDS is being developed for use on the current WWMCCS computers, it is a major component of the Conventional Planning and Execution (CPE) functional family of the WWMCCS Information System (WIS) modernization program. The WIS modernization program is scheduled for implementation in the late 1980s.

2. OBJECTIVE

The objectives of the JDS are to:

a. Establish and maintain a deployment data base during deliberate and time-sensitive planning, deployment execution, and sustainment operations.

b. Provide support for execution planning and execution by refinement of major OPLAN Time-Phased Force and Deployment Data (TPFDD) during deliberate planning.

c. Provide time-sensitive planning support for both course of action development and execution for established OPLAN, no-plan and multiple OPLAN situations.

d. Provide support and procedures to monitor and provide deployment status of forces, materiel, and non-unit personnel; the capability to rapidly change the planned deployment flow to respond to changes; and the identification of bottlenecks and alternative solutions.

e. Provide timely dissemination of deployment data by automated interfaces with JDC members.

f. Provide capability for continued performance of functions during degraded operations.

g. Improve the interface between operational users and automated systems.

3. PROPONENT

The lead agency for this program is the Joint Deployment Agency (JDA). The sponsors are the US Air Force, Army, Navy, and the Defense Communications Agency (DCA). Other key agencies/activities include the Joint Chiefs of Staff (JCS), and the three Transportation Operating Agencies (TOAs): the Military Airlift Command (MAC), the Military Traffic Management Command (MTMC), and the Military Sealift Command (MSC).

4. RELATED SYSTEMS

a. Those software systems which currently support the JDS include the following:

(1) JOPS III Software (Joint Operation Planning System ADP) (JCS)
(2) IMAPS (Integrated Military Airlift Planning System) (MAC)
(3) MAPS II (Military Analysis and Planning System II) (MTMC)
(4) SEACOP III (Sealift Contingency Planning System III) (MSC)
(5) COMPES (Contingency Operations/Mobility Planning and Execution System) (USAF)

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b. Software systems which may be utilized to support the JDS in the future include:

(1) LOGNET (Logistics Data Network) (AMC)

(2) TC ACCIS (Transportation Coordinator Automated Command and Control Information System)(JDA)

(3) ASPUR (Automated System for Processing Unit Requirements) (MTMC)

(4) MOBSCOPE (Mobilization Shipments Configured for Operation Planning and Execution) (MTMC)

(5) MAPS III (Mobility Analysis and Planning System III) (MTMC)

(6) CAMS (Crisis Action Management System) (MTMC)

(7) CMSS (Crisis Management Support Subsystem) (MSC)

(8) SEASTRAT (Sealift Strategic Planning Subsystem) (MSC)

An information sheet for each system is attached.

5. SCHEDULE

ITEM	DATE
Brief JDC (CINCs, RDJTF, Components, TOAs)	September 1982
Brief Chairman JCS	October 1982
Brief Deputy Secretary of Defense	October 1982
Prototype Software Contractors on Board (for Models and No-plan)	July 1983
Demonstrate Initial Capability of Prototype	November/December 1983
Obtain Additional Computer at JDA	January 1984
Complete Prototype Integration and Checkout	May 1984
Conduct Analysis and Programming	June/December 1984
Conduct Testing	January/September 1985
Establish CY 85 Baseline	September 1985

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6. POINTS OF CONTACT

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7. FUNDING

There are four basic sources of funds for the JDS: the Air Force, the Army, the Navy, and the Defense Communications Agency (DCA). All of the money is from the procurement (3080), the operations and maintenance (O&M) (3400), and the military construction-active (3300) appropriation categories. No research and development (R&D) (3600) money is being used for the JDS. In general, funding support specifically for the JDS at the non-JDA sites has not been programmed. Past support has been absorbed by the sites, usually causing a delay in some other system upgrade.

Air Force funding for the JDS is contained in two PEs. PE 33151F (WWMCCS ADP) funds for maintenance and PE 21131F (USREDCOM COMMUNICATIONS) funds for unique applications. Together these PEs fund JDS software development and JDA/USREDCOM hardware enhancements at McDill Air Force Base. They have also funded all the Air Force JDS sites for equipment upgrades except the Military Airlift Command (MAC). A profile of programmed JDS funding under PE 33151F is as follows:

	FY86	FY87	FY88	FY89	FY90	FY91
3400	2.5M	1.9M	3.4M	3.4M	3.2M	2.2M

The funding profile for PE21131F is:

	FY86	FY87	FY88	FY89	FY90	FY91
3400	1.6M	3.5M	4.2M	3.6M	3.6M	3.5M

Funds programmed for USREDCOM requirements and the USREDCOM/JDA command center upgrade are not included in these figures.

MAC funds JDS support through 41840F (MAC C^2). MAC has indirectly planned for JDS equipment enhancements. Money is programmed to replace worn out equipment, but the dollars are not specifically designated for JDS. Therefore, funds programmed for JDS are not explicitly identifiable.

The Army has programmed O&M funding under PE33151A (WWMCCS ADP-Army) in support of the JDS as follows:

FY86	FY87	FY88	FY89	FY90	FY91
1.289M	1.337M	1.253M	1.165M	1.167M	1.167M

The Navy has not programmed funds for JDS. Navy sites have had to absorb any costs associated with the JDS support. Most likely this money has come from 33151N (WWMCCS-Navy) and the upgrades were not exclusively supportive of the JDS.

The DCA Command and Control Engineering Center (CCEC) is responsible for funding enhancements to the NMCC and ANMCC WWMCCS computers. This is done under 32018K (WWMCCS ADP-NMCC). In the past, JDS related upgrades have been absorbed by DCA. There is now a memorandum of agreement between DCA and JDA that states that JDA will fund such requirements at the NMCC and ANMCC. The 6000 DPS upgrades at the NMCC and ANMCC, which were accomplished in response to JCS operational requirements, have resulted in sufficient capacity to accommodate the JDS. JDA has been brought on line at the NMCC.

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8. REFERENCES

"Joint Deployment System, Concept Description" (U), Joint Deployment Agency, 15 July 1983

"Joint Deployment System, Functional Description" (U), Joint Deployment Agency, 24 May 1982

"Joint Deployment System, Development Status" (U), Briefing, Joint Deployment Agency, 16 December 1983.

"Joint Deployment System, Users Manual" (U), Joint Deployment Agency, 10 October 1983.

"Minutes of Joint Surface Movements Board, Twenty-First Meeting" (U), United States Readiness Command, 7-8 June 1983

"Requirements Definition Mode Optimization and Delivery Estimation System (MODES), Phase I Final Report" (U), BDM for the Joint Deployment Agency, July 1983.

"Joint Operation Planning System, Volume III (ADP Support)" (U), Joint Chiefs of Staff, 29 April 1977.

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MOBILITY C^3 INFORMATION SHEET

SYSTEM ASPUR

DESCRIPTION

The Automated System for Processing Unit Requirements (ASPUR) has been developed for the Military Traffic Management Command Eastern Area (MTMCEA). The purposes of this system are to (1) transfer data between TC ACCIS and MTMCEA internal processing systems, and (2) collect the data that is being transferred so as to permit access by all MTMCEA users, i.e., provide deployment monitoring information.

The interface between ASPUR and TC ACCIS will be electronic data transmission via DDN/MILNET. A host to host communications protocol will be required.

Data transmissions from the TC ACCIS will provide the ASPUR with updated unit movement requirements. Data transmission from the ASPUR back to the TC ACCIS will supply routing and rate information and port call authorization.

Once surface transportation requirements have been determined with the support of the TC ACCIS, they will be transmitted to ASPUR for processing. The functional responsibility for this operation by TC ACCIS resides with the ITO/TMO. Updated requirements will be generated and transmitted as available by TC ACCIS throughout the deployment.

ASPUR will process all updates so that MTMCEA messages will reflect the latest information. Once MTMCEA has completed its processing, ASPUR will send a Unit Cargo Release Message to TC ACCIS. A significant portion of subsequent TC ACCIS processing is dependent on reception of this information.

Detailed policies regarding procedures and periodicity of data transfer still need to be established.

MOBILITY C^3 INFORMATION SHEET

SYSTEM CAMS

DESCRIPTION

The Crisis Action Management System (CAMS) will provide the Military Traffic Management Command (MTMC) with a real-time execution planning, execution, and exeuction monitoring command and control system. It will retrieve, process, and analyze data from both classified and unclassified internal and external data systems. In addition, CAMS will provide MTMC with a single medium for monitoring the status of all CONUS mobilization movements.

CAMS will include the following capabilities:

a. Analysis and monitoring: CAMS will have an analysis model that will permit MTMC to perform deliberate planning analysis of force modules, provide an interface with MODES, assess the impact of changing requirements on OPLAN feasibility, and determine the impact of mobilization movements on deployments.

b. Communications: CAMS will be the single vehicle through which MTMC will interface with JDS. Using this interface, MTMC will validate movement requests received from ITO's and return schedule information to JDS. CAMS will also provide an interface among systems currently used at MTMC and upgrade these systems so that they are large and fast enough to handle major contingencies.

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c. Information reporting: An important capability that CAMS will provide is the ability to retrieve and present information in a manner useful to the user of that information. This capability will enable the decision makers to retrieve summary level information essential to their decision making process while providing the operators with the details they need to do their job.

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MOBILITY C^3 INFORMATION SHEET

SYSTEM CMSS

DESCRIPTION

CMSS will be the primary component of the Military Sealift Command (MSC) Automated Information System Architecture (AISA) and is being developed to implement the information support required by MSC to fulfill its role in the time sensitive planning and execution process. MSC, as a Transportation Operating Agency (TOA), is required to interface directly with the supported Commanders-in-Chief (CINCs) and the Joint Deployment Agency (JDA) during this process. The CMSS will support intensive management of sealift resources through its command and control procedures. Assessment of the availability of sealift resources to support the CINCs will be conducted and procedures executed to obtain and position the necessary sealift assets. Augmentation of the MSC controlled fleet may be necessary and a determination must be made as to the methods to be employed to effect such augmentation. The crisis management function will carry out all coordination to ensure timely and orderly execution of MSC responsibilities in a crisis.

During non-crisis situations the CMSS will be used to direct MSC efforts in testing crisis procedures in deployment exercises and maintaining and updating JCS approved Operational Plans (OPLANS). This system will include all command and control activities at all levels of the MSC organization.

The functions to be performed by CMSS are:

a. Maintaining and updating JCS approved OPLANS.

b. Crisis Action/Time Sensitive Planning in accordance with the JCS JOPS and the JDA Joint Deployment System (JDS).

c. Maintaining and directing the MSC Command and Control Operations.

d. Planning for and coordination of MSC-wide participation in deployment exercises.

e. Maintaining cognizance over special programs (e.g., OTSR-Optimum Track Ship Routing, AMVER-Automated Merchant Ship Vessel Report, etc.).

MOBILITY C^3 INFORMATION SHEET

SYSTEM COMPES

DESCRIPTION

The Contingency Operation/Mobility Planning and Execution System (COMPES) is an operational Air Force automated data system designed to provide a standard data base for contingency planning and execution. There are two modules, Manpower/Personnel (MANPER) and Logistics (LOGMOD). Each module has versions for base level use and major command use. The base level portions of the modules contain current unit personnel and cargo deployment data. The major command portions of the modules contain aggregated personnel and cargo deployment data for subordinate units. MANPER is an embedded program in the Air Force Manpower Management System while LOGMOD is a stand-alone program. Both modules are currently batch-mode operations which are being upgraded to transaction distributed data processing. It is planned that the base level portions of the modules and the Transportation Coordinator Automated Command and Control Information System (TC ACCIS) will interface using magnetic tape. The base level portions of COMPES will provide TC ACCIS with the initial information on unit personnel, equipment, and planned movement requirements.

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MOBILITY C^3 INFORMATION SHEET

SYSTEM IMAPS

DESCRIPTION

The Integrated Military Airlift Planning System (IMAPS) is the Military Airlift Command's (MAC's) automated system for gathering airlift requirements, scheduling missions, and generating user reports. IMAPS consists of three subsystems: Airlift Requirements Collector (ARC), Flow Generator (FLOGEN), and Reports Generator (REPGEN).

For deliberate planning, airlift requirements data in the form of Time-Phased Force and Deployment Data (TPFDD) is transmitted to MAC via the WWMCCS Intercomputer Network (WIN) or a mailed/couriered magnetic tape. The ARC extracts and organizes data required for airlift plan generation, creating a MAC unique data base of inputs for FLOGEN. For execution planning, a time-sensitive situation, the supported CINC provides requirements to the Joint Deployment Agency (JDA). JDA loads the appropriate airlift requirements into the Joint Deployment System (JDS) and transmits them to MAC via WIN for input into FLOGEN.

FLOGEN is an on-line system which permits MAC planners to add to, delete, or change the airlift requirements data. FLOGEN then schedules the airlift resources producing an airflow for a given set of conditions (i.e., aircraft availability, utilization rates, passenger and cargo data, routings, minimum aircraft loads, required delivery dates, port constraints, etc.). During deliberate and execution planning, any conflicts that arise because the scheduled movement of requirements does not meet the supported CINC's needs are resolved through JDA with the scheduling process being repeated until a mutually acceptable schedule is produced. FLOGEN is data intensive (i.e., a fairly large number of variables must be specified). Also, the program requires several hours to produce a new schedule.

Once an acceptable airlift schedule is produced, the IMAPS Report Generator (REPGEN) produces selected reports describing various aspects of the final schedule. These reports include such data as notional aircraft tail numbers, tons of cargo to be airlifted, and scheduled departure times. These reports are used as annexes to the resulting MAC supporting plans. Additionally, the movement tables produced are appended to the final TPFDD in summary reference file format and are transmitted to the JDS data base via WIN.

MOBILITY C^3 INFORMATION SHEET

SYSTEM JOPS III SOFTWARE

DESCRIPTION

Joint Operations Planning System III (JOPS III) is a computer based system designed to improve the effective utilization of existing military resources in preplanned operations and unforeseen time sensitive situations. The system is designed to support the development of OPLANS. JOPS III is designed to operate on a WWMCCS H6000 GSS/M configuration.

A JOPS III data base has been established consisting of the following files:

(1) Aerial Ports and Air Operating Bases (APORTS)
(2) Civil Engineering File (CEF)
(3) Characteristics of Transportation Resources (CHSTR)
(4) Transportation Assets
(5) Port Characteristics (PORTS)
(6) Status of Plans
(7) Deployment Data (DEPDA)
(8) Type Unit Data (TUCHA)
(9) Logistics Factors File (LFF)

File support programs are written in ANSI COBOL and will use the Honeywell 600/6000 ISP (indexed sequential processing).

The JOPS III applications programs consist of the following:

(1) System Monitor (SM)
(2) Force Requirements Generator (FRG)
(3) Movement Requirements Generator (MRG)
(4) Transportation Feasibility Estimator (TFE)

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(5) TPFDD Interface (T/I)
(6) Standard Distance Software
(7) Civil Engineering Support Plan Generator (CESPG)
(8) Medical Planning Program (MPP)

These programs access data from the appropriate JOPS III files. Each is a separate program, but some may be combined in use to permit on-line modification and evaluation of planning data. Of particular interest here and briefly discussed below are the FRG, MRG, and TFE programs.

The FRG program provides the military planner with the ability to generate and change Time-Phased Force and Deployment Data (TPFDD) in support of joint operation plans. It may reduce the need for extensive keypunching and batch processing of force and routing data. The FRG produces a TPFDD in the standard Deployment Reporting System (DEPREP) format as a final product.

The MRG provides a capability to generate gross nonunit-related cargo and personnel requirement estimates based upon the forces to be supported and the duration of the planned operation. It uses factors provided by the military planner on a day-by-day basis in developing the requirements for replacement personnel and cargo, including resupply and supply buildup. The program produces data required by the TFE and for Transportation Operation Agency (TOA) unique systems.

The TFE provides automated assistance to the planner in evaluating the feasibility during plan development in terms of strategic movement. The program considers data generated by the other JOPS III programs, such as the forces to be deployed, the cargo and personnel to be moved (both unit- and non-unit-related), PODs, destination, and required arrival dates. The final product of this program is a Time-Phased Transportation Requirements List (TPTRL).

MOBILITY C^3 INFORMATION SHEET

SYSTEM LOGNET

DESCRIPTION

The Logistics Data Network (LOGNET) is an Army Materiel Command (AMC) prototype system designed to isolate and quickly identify logistics materiel resource constraints which impact proposed courses of action and to make logistics materiel information available to planners early in the planning process. The LOGNET uses an integrated data base, communications links, and an interactive system to perform logistics feasibility assessments of proposed courses of action. The output of the LOGNET is a bottom line feasibility assessment, identification of specific shortfall items, and a redistribution plan (for Class VII) for initial deployment. LOGNET is a possible candidate for a future interface with the Joint Deployment System (JDS).

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MOBILITY C^3 INFORMATION SHEET

SYSTEM MAPS II

DESCRIPTION

The Military Analysis and Planning System (MAPS) II is the Military Traffice Management Command's (MTMC's) primary ADP system supporting deliberate planning. It supports the Time-Phased Force and Deployment Data (TPFDD) refinement process, accepting the TPFDD and intraCONUS Movement Report (INCONREP) data as inputs. MAPS II prepares movement schedules requiring commercial transportation from CONUS point of origin to air and sea ports of embarkation (POEs).

MAPS II outputs include movement tables (reflecting notional moves), management reports, and a summary reference file (SRF). Since MAPS II is a deliberate planning system and the Joint Deployment System (JDS) is primarily a crisis action system (CAS), no interface exists between the two. MAPS III is the planned evolution of MAPS II in support of deliberate planning.

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MOBILITY C^3 INFORMATION SHEET

SYSTEM MAPS III

DESCRIPTION

The Military Analysis and Planning System (MAPS) III is the Military Traffic Management Command's (MTMC's) evolutionary upgrade of MAPS II as their primary ADP system supporting deliberate planning.

MOBILITY C^3 INFORMATION SHEET

SYSTEM MOBSCOPE

DESCRIPTION

The Military Traffic Management Command's (MTMC's) Mobilization Shipments Configured for Operation Planning and Execution system (MOBSCOPE) is a prototype for possible replacement of the IntraCONUS Movement Report (INCONREP). There will be an interface with the Joint Deployment System (JDS).

MOBILITY C^3 INFORMATION SHEET

SYSTEM SEACOP III

DESCRIPTION

The Sealift Contingency Planning System (SEACOP) III is an automated system designed for the Military Sealift Command (MSC) to determine gross delivery feasibility of joint operations plan (OPLAN) sealift requirements. A primary output of the system is a sealift movement table which is based on the cargo, troop, and POL sealift requirements of an OPLAN. Using the shipping resources available to MSC along with characteristics of the ports to be used and the specified assumptions and planning factors, the system identifies the types and numbers of ships required to accomplish the sealift. The movement tables plus the corresponding reports or annexes produced by SEACOP III supply the military plans analyst with information to determine if the sealift requirements can be delivered within the established time frame. Input for SEACOP III is through an automated interface with the Joint Operation Planning System (JOPS) Time Phased Force Deployment Data (TPFDD) file. SEACOP III extracts the sealift designated requirements and the associated CONUS movement schedule data from TPFDD and processes it using an executive routine and seven subsystems. The ultimate output is the sealift movement table that includes the ships used, amount of the requirement carried, the ports of embarkation (POE), the ports of debarkation (POD), and the arrival dates. The primary output is hard copy printed reports. Summary movement data is also formatted on tape for merging into the TPFDD via standard JOPS modules. The system also produces summaries of requirements, summaries of loading by POE and unloading by POD and ship schedule reports to be issued as appendices to the OPLAN.

The feasibility information and movement tables produced by SEACOP III are very static and notional because they are based on notional ship availability.

A TPFDD which is indicated as sealift-feasible one month may not be the next month because of changing ship locations in the world-wide Maritime trades. SEAPCOP III is unable to merge multiple OPLAN requirements.

MOBILITY C^3 INFORMATION SHEET

SYSTEM SEASTRAT

DESCRIPTION

The Sealift Strategic Planning Subsystem (SEASTRAT) when developed will replace the Military Sealift Command's (MSC's) Sealift Coningency Planning System (SEACOP) III. SEASTRAT, will improve the automated support available for accomplishment of the functions of providing in-depth feasibility analysis of the sealift portion of CINC's OPLANs, identifying the available ship assets to be used in the planning process, supporting and identifying the need for Advanced Base Functional Components (ABFCs), determining annual bunker fuel requirements, and the capability to interface and meet the requirements of CNO, CINCs, and JDA. The key objective of SEASTRAT is to facilitate the provision of ocean transportation planning support to the emergency, evacuation, mobilization, and joint operation plans of the JCS, the Military Services and the Unified and Specified commanders.

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MOBILITY C^3 INFORMATION SHEET

SYSTEM TC ACCIS

DESCRIPTION

The Transportation Coordinator Automated Command and Control Information System (TC ACCIS) was a research and development project to demonstrate an ADP command and control system which will allow generation of timely and accurate unit movement requirements information and the documentation associated with unit deployments. Unit movement requirements include information such as number of personnel, weight and cube of cargo, points of origin and destination, transportation mode, and time frame for the movement. The associated documentation includes passenger and cargo manifests, Government Bill of Lading, and export clearance documents. The 24th Infantry Division and the Military Traffic Management Command Eastern Area participated in the TC ACCIS demonstration which was completed in May 1985. The prototype demonstration included installation of interactive terminals, with user friendly applications programs, at each base or installation. The terminals were used for updating or modifying unit movement requirements data and for producing related documentation reports. The data base information at bases and installations will be available, through existing channels, to the Joint Chiefs of Staff (JCS), Joint Deployment Agency (JDA), Transportation Operating Agencies (TOAs), and other members of the WWMCCS community for use during periods of crisis.

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TRANSPORTATION COORDINATOR AUTOMATED COMMAND AND CONTROL INFORMATION SYSTEM (TC ACCIS)

1. DESCRIPTION

The TC ACCIS was a research and development project to demonstrate an ADP command and control system which will allow generation of timely and accurate unit movement requirements information and the documentation associated with unit deployments. Unit movement requirements include information such as number of personnel, weight and cube of cargo, points of origin and destination, transportation mode, and time frame for the movement. The associated documentation includes passenger and cargo manifests, Government Bill of Lading, and export clearance documents. The 24th Infantry Division and the Military Traffic Management Command Eastern Area participated in the TC ACCIS demonstration. The prototype demonstration included installation of interactive terminals, with user friendly applications programs, at each base or installation. The terminals were used for updating or modifying unit movement requirements data and for producing related documentation reports. The data base information at bases and installations was made available, through existing channels, to the Joint Chiefs of Staff (JCS), Joint Deployment Agency (JDA), Transportation Operating Agencies (TOAs), and other members of the WWMCCS community for use during periods of crisis.

There has been no DoD direction that the services are to implement TC ACCIS. Therefore, a "wait and see how successful the demonstration is" attitude has prevailed. This in turn has inhibited the preparation, staffing, and approval of the documents necessary for firm planning and funding.

2. OBJECTIVES

The objectives of TC ACCIS:

a. Demonstrate that the timeliness, accuracy, and availability of unit movement information at the working level can be improved through data automation

b. Improve crisis deployment by providing current and detailed unit movement requirements to the Transportation Operating Agencies (TOAs) early in the execution planning process

c. Provide a capability at the installation/base level to handle movement workloads which range from peacetime operations through large-scale deployments

d. Provide a source of automated transportation data to selected WWMCCS users to support command and control reporting requirements during execution planning and deployment execution

e. Improve deployment responsiveness through automated documentation preparation support at the installation/base level.

3. PROPONENT

The development of TC ACCIS was directed by the OJCS. The original sponsor of the prototype development was the Defense Communications Agency (DCA) Joint Data Services Support Center (JDSSC). The WWMCCS Information System Joint Program Management Office (WIS JPMO) and JDA have jointly managed and directed the TC ACCIS program. The other key agencies and headquarters participating in the program were:

US Army Forces Command (FORSCOM)

Military Traffic Management Command (MTMC)

4. RELATED SYSTEMS

The TC ACCIS is to interface with the following systems:

JDS	Joint Deployment System
AALPS	Automated Air Load Planning System
ASPUR	Automated System for Processing Unit Requirements
COMPASS/AUEL	Computerized Movement Planning Status System/Automated Unit Equipment List
COMPES	Contingency Operations/Mobility Planning and Execution System
DMES	Deployable Mobility Execution System
SEMS	Standard Embarkation Management System

An information sheet for each system is attached.

5. SCHEDULE

The TC AACIS prototype demonstration was completed on 3 May 1985.

There are no Service plans for implementation of TC ACCIS at this time. However, discussions within the Army have tentatively identified up to 27 possible sites. The Air Force has tentatively identified up to 131 possible sites.

6. POINTS OF CONTACT

Mr. W. Crisp, WIS JPMO	697-5408
LTC E. J. Pollock, JDA	(813) 830-3885
Ms. D. Furr, MTMC	756-2480
MAJ G. T. Thomson, AFLETX	697-7332
Mr. L. Johnson, HQ USMC	694-1807
LTC J. Burtnett DALO-TSM	694-6619
Mr. Mark O'Konski, DALO-TSM	694-6607

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7. FUNDING

The Army budget for TC ACCIS implementation is as follows:

FY	86	87	88	89	90	91
$Mil	4.890	5.122	5.439	5.639	5.830	6.029

These budgeted funds are not specifically identified but are aggregated with other items in PEs 33151 and 33298. The other Services have not budgeted for TC ACCIS implementation due to lack of an approved program document, such as a Required Operational Capability (ROC), Statement of Need (SON), or Mission Element Needs Statement (MENS), which is normally required in the justification of a budget submission. A ROC for a TC ACCIS-like capability has now been prepared by JDA and staffed through the Services for initial review and comment. Upon incorporation of these comments and final Service approval, the ROC will be forwarded to JCS for validation.

8. REFERENCES

"Transportation Coordinator Automated Command and Control Information System" (U), Briefing, Defense Communications Agency, October 1982.

"Transportation Coordinator Automated Command and Control Information System Data Base Specification Volume 1 (Draft)" (U), Defense Communications Agency, April 1983.

"Transportation Coordinator Automated Command and Control Information System Master Milestone Schedule Revision 4" (U), Defense Communications Agency, May 1983.

"Minutes of Joint Surface Movements Board Twenty-First Meeting, 7-8 June 1983" (U), United States Readiness Command, 15 July 1983.

"Required Operational Capability for a Transportation Coordinator Automated Command and Control Information System (TC ACCIS) (JDA ROC 2-85)" (U), Joint Deployment Agency, 1 March 1985 (Draft).

MOBILITY C^3 INFORMATION SHEET

SYSTEM AALPS

DESCRIPTION

The Automated Air Load Planning System (AALPS) was developed for the XVIII Airborne Corps by the Defense Advanced Research Projects Agency (DARPA) as part of a larger experiment. It automates the current manual method of aircraft load planning by using computers available through the Army Data Distribution System (ADDS) experiment being conducted at Fort Bragg, North Carolina. The AALPS model addresses the four essential load delivery methods: strategic air land, tactical air land, air drop, and low altitude parachute extraction system, as well as three aircraft types: C-141B, C-5A, and C-130.

The AALPS is currently running on a DEC TOPS20. Conversion to a DEC VAX 11/780 computer is being performed by SRI, International under contract to the Army.

The communications interface between TC ACCIS and AALPS will be electronic data transmission via DDN/MILNET.

The operational concept is that, upon initiation of operations, TC ACCIS will transfer load characteristics data to AALPS for integration into the AALPS data base. During deployment, AALPS will return data to TC ACCIS permitting production of cargo manifests.

For purposes of the demonstration, a separate data base will be created by AALPS to retain data supplied by TC ACCIS. AALPS will transfer information about aircraft characteristics to TC ACCIS to ensure that valid edit checks are passed within TC ACCIS.

The TC ACCIS will load the AALPS data base with TC ACCIS data upon initiation of operations. When a change has been made to a TC ACCIS equipment record, an update transaction will be created and sent to the AALPS for update of the AALPS files.

Detailed policies regarding procedures and periodicity of data transfer still need to be established.

Additional software is being developed to facilitate transfer and update of information for the demonstration.

MOBILITY C^3 INFORMATION SHEET

SYSTEM ASPUR

DESCRIPTION

The Automated System for Processing Unit Requirements (ASPUR) has been developed for the Military Traffic Management Command Eastern Area (MTMCEA). The purposes of this system are to (1) transfer data between TC ACCIS and MTMCEA internal processing systems, and (2) collect the data that is being transferred so as to permit access by all MTMCEA users, i. e., provide deployment monitoring information.

The interface between ASPUR and TC ACCIS will be electronic data transmission via DDN/MILNET. A host to host communications protocol will be required.

Data transmissions from the TC ACCIS will provide the ASPUR with updated unit movement requirements. Data transmission from the ASPUR back to the TC ACCIS will supply routing and rate information and port call authorization.

Once surface transportation requirements have been determined with the support of the TC ACCIS, they will be transmitted to ASPUR for processing. The functional responsibility for this operation by TC ACCIS resides with the ITO/TMO. Updated requirements will be generated and transmitted as available by TC ACCIS throughout the deployment.

ASPUR will process all updates so that MTMCEA messages will reflect the latest information. Once MTMCEA has completed its processing, ASPUR will send a Unit Cargo Release Message to TC ACCIS. A significant portion of

subsequent TC ACCIS processing is dependent on reception of this information.

Detailed policies regarding procedures and periodicity of data transfer still need to be established.

MOBILITY C3 INFORMATION SHEET

SYSTEM COMPASS/AUEL

DESCRIPTION

The Army's Computerized Movement Planning and Status System (COMPASS) was developed to provide a source of automated information pertainng to unit movement requirements which could be used in mobilization and deployment planning. The system is now managed and maintained by the US Army Forces Command (FORSCOM). In order to provide more support for execution planning and execution, FORSCOM, working with the Military Traffic Management Command (MTMC), has drawn on information in the COMPASS to create the Automated Unit Equipment List (AUEL). The AUEL, which is updated periodically by the FORSCOM units, provides a source of more accurate and timely unit movement requirements information.

A redesign of the COMPASS is being evaluated by FORSCOM. The AUEL is now being implemented in FORSCOM units.

The AUEL detailed unit movement data will be provided to the TC ACCIS on tape. AUEL data will also continue to provided to the MTMC in the form of a tape which can be used by the MTMC area commands for deployment planning and execution.

For purposes of the demonstration, the AUEL data pertaining to the selected demonstration units at Fort Stewart will be taken from a tape provided by the FORSCOM and loaded into the TC ACCIS data base. These data, together with other information provided by the units, shall constitute the initial version of the Master Equipment Table.

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Upon initiation of operations, the TC ACCIS data base will be loaded with AUEL data. Subsequent updating of the TC ACCIS data base will be accomplished by unit personnel using system terminals.

The TC ACCIS will have the capability to provide information updates for COMPASS/AUEL via the currently used method of hardcopy reports. However, the use of tape is being explored.

Detailed policies regarding procedures and periodicity of data transfer still need to be established.

MOBILITY C^3 INFORMATION SHEET

SYSTEM COMPES

DESCRIPTION

The Contingency Operation/Mobility Planning and Execution System (COMPES) is an operational Air Force automated data system designed to provide a standard data base for contingency planning and execution. There are two modules, Manpower/Personnel (MANPER) and Logistics (LOGMOD). Each module has versions for base level use and major command use. The base level portions of the modules contain current unit personnel and cargo deployment data. The major command portions of the modules contain aggregated personnel and cargo deployment data for subordinate units. MANPER is an embedded program in the Air Force Manpower Management System while LOGMOD is a stand-alone program. Both modules are currently batch-mode operations which are being upgraded to transaction distributed data processing. It is planned that the base level portions of the modules and TC ACCIS will interface using magnetic tape. The base level portions of COMPES will provide TC ACCIS with the initial information on unit personnel, equipment, and planned movement requirements.

MOBILITY C^3 INFORMATION SHEET

SYSTEM DMES

DESCRIPTION

The Deployable Mobility Execution System (DMES) is a prototype microcomputer system for performing interactive aircraft load planning of cargo and personnel on current Air Force aircraft (C-141B, C-5A, and C-130). A capability will be provided to maintain a data base in the DMES to produce aircraft load plans. This data base will consist of end items only (those needed for load planning). The DMES is being developed by the Air Force Logistics Management Center, Gunter Air Force Station, Alabama.

The DMES will also be used by the Marine Corps for air load planning.

A prototype demonstration of DMES on the Hewlett Packard 9836 was given in January 1983 with implementation in the third quarter of 1983. DMES is being reprogrammed to operate on the Air Force standard microcomputer, the Zenith 100.

A final decision has not been made as to whether the interface between TC ACCIS and DMES should be by direct link for file transfers or floppy disk. The use of a floppy disk would enhance operational flexibility, while a direct link would permit full use of the capabilities of TC ACCIS. The two using Services may reach separate decisions on an appropriate interface.

Upon initiation of operations, TC ACCIS will create a data base of load movement and air frame requirements for transmittal to DMES. All information will be keyed into DMES by operating personnel.

If a floppy disk interface is chosen, DMES will generate a disk upon completion of operations. This disk will be sent to TC ACCIS for inclusion in

its data base to provide a complete history. If a direct link interface is used, TC ACCIS will be employed to generate the manifest.

Detailed policies regarding procedures and periodicity of data transfer still need to be established.

MOBILITY C^3 INFORMATION SHEET

SYSTEM JDS

DESCRIPTION

The JDS consists of the personnel, procedures, directives, communications systems, and automatic data processing systems required to directly support strategic deployment time-sensitive planning and execution and to complement peacetime deliberate planning of deployment. It supports the overall World Wide Military Command and Control System (WWMCCS) strategic deployment planning process, providing an integrated joint deployment management information system which assists the Joint Chiefs of Staff (JCS), Supported Commanders, and the remainder of the Joint Deployment Community (JDC) in strategic deployment planning, execution, and monitoring. Eventually, the JDS and the Joint Operation Planning System (JOPS), which establishes the policies and procedures for planning and executing strategic military deployments, will be integrated to become the Joint Operation Planning and Execution System (JOPES).

The JDS is built around a centralized integrated deployment master data base established and maintained in the Joint Deployment Agency (JDA) WWMCCS computer system (dual DPS-8 Honeywell CPUs plus ancillary equipment). In its complete form, the JDS data base consists of refined Time-Phased Force and Deployment Data (TPFDD) files and movement tables. A TPFDD file contains time-phased force and transportation data for an OPLAN including: units to be employed, units to be deployed in support of the OPLAN with an assigned arrival priority, routing of forces to be deployed, mobility data associated with deploying forces, nonunit-related personnel and resupply movements, and estimates of transportation requirements. Movement tables are tables prepared by the Transportation Operating Agencies (TOAs) for each force requirement and each nonunit-related cargo or personnal increment of the TPFDD concerning the scheduled movement from the origin or POE,

intermediate location, and POD or destination. In addition to the JDS master data base, distributed data bases at designated WWMCCS sites are incorporated into the JDS through real-time, transaction-oriented, distributed processing. These distributed data bases are subsets of the JDS master data base and support the deployment responsibilities of that site. The principal function of the current JDS is information coordination among members of the JDC.

Because of the dispersed geographic location of the various distributed data bases, their users, and their command unique WWMCCS computer assets, the JDS relies heavily on the WWMCCS Intercomputer Network (WIN) for data transfer. Each JDS site maintains the currency of data for which it is responsible. As an update is made at a local data base, the JDS automatically generates update transactions throughout the system. This new data is received by other JDS sites in a matter of seconds. Sites which currently have all or a portion of the JDS data base include the following: USPACOM, MAC, HQ Air Force, HQ Army, NMCC, MTMC, USREDCOM, JDA, USAREUR, USEUCOM, US Forces Korea, USAFE, TAC, USLANTCOM, USNAVEUR, USPACAF, and the Air Force Logistics Command. The Chief of Naval Operations (CNO) will receive the JDS at a future date.

The second method of data transfer, via the WIN File Transfer Service (FTS), provides bulk data transfer capability for automated interface with command unique application systems such as MAC's FLOGEN.

AUTODIN is used to transmit automated schedule messages to installations of deploying units. It also provides a backup means for using text formatted messages to update the JDS data base when primary update means are not available.

As the JDS evolves, its information coordinating role will include crisis action planning via the No-Plan System (NPS). The NPS will support timely development of transportation feasible Time-Phased Force and Deployment

Data (TPFDD) for situations where no OPLAN exists or existing OPLANs must be modified. The NPS will consist primarily of the Force Module files and the Mode Optimization and Delivery Estimation System (MODES) model. The Force Module files will contain data on a grouping of combat, combat support, and combat service support and sustainment forces linked together or uniquely identified so that they may be extracted or adjusted as a single entity, thus, facilitating planning. The MODES model will function as a transportation feasibility estimator, supporting rapid evaluation of courses of action. MODES will draw upon data from the Force Module files and other sources.

Although the JDS is being developed for use on the current WWMCCS computers, it is a major component of the Conventional Planning and Execution (CPE) functional family of the WWMCCS Information System (WIS) modernization program. The WIS modernization program is scheduled for implementation in the late 1980s.

MOBILITY C^3 INFORMATION SHEET

SYSTEM SEMS

DESCRIPTION

The Standard Embarkation Management System (SEMS) has been developed by the Marine Corps. Its purpose is to assist Marine Corps units in the documentation of the embarkation planning and in the execution planning of amphibious operations.

The interface with TC ACCIS will be by floppy disk. SEMS will transfer previously configured unit load movement information (i.e., number of personnel, equipment, and supplies) to TC ACCIS. TC ACCIS will receive this information on floppy disks to establish files and will be capable of creating floppy disks with added information for SEMS.

No final decision has been made as to whether all of SEMS data will be transferred to TC ACCIS or whether SEMS will create a special file. Data will be transferred at the onset of operations and will be updated periodically. Detailed policies regarding the procedures and periodicity of data transfer still need to be established.

AN/ARC-190/ACP

1. DESCRIPTION

The AN/ARC-190 high frequency (HF) radio transceiver is a state-of-the-art design unit. The Air Force has entered into a Class IV C (equipment replacement) aircraft modification program to replace old, unreliable, not logistically supportable HF radio equipment in its aircraft and ground station terminals.

The Automatic Communications Processor (ACP) modification to the AN/ARC-190 is a follow-on program to increase the reliability of HF radio communications. NOTE: ACP was originally referred to as SELSCAN (selective channel scanning).

2. OBJECTIVES

The objective of the AN/ARC-190 modification program is to provide highly reliable, logistically supportable HF radio equipment for aircraft and ground station terminals.

The objective of the ACP modification program is to increase the reliability of HF radio communications.

The accomplishment of these objectives will permit the use of HF as the MAC C^2 long haul backbone communications system.

3. PROPONENT

The proponent of the AN/ARC-190/ACP programs is the Air Force. MAC is the sponsor for airlift aircraft.

4. RELATED SYSTEMS

KC-10A Interface with MAC
CRAF

An information sheet for each system is attached.

5. SCHEDULE

The AN/ARC-190/ACP modification for MAC airlift aircraft are scheduled to begin in FY 86 and be completed in FY 90. The installation of AN/ARC-190/ACP compatible equipment in the MAC command and control ground stations is scheduled to begin in FY 86 and be completed in FY 91.

6. POINTS OF CONTACT

Col R. Murphy, HQ MAC	(618) 256-5701
Maj (LTCOL Sel.) Geoffrey Bishop, AF-SIMCT	697-1718

7. FUNDING

The MAC funding is included in Program Element (PE) 41840F. The funding profile is as follows:

	FY86	FY87	FY88	FY89	FY90	FY91
41840F						
3010	0	2.8M	11.5M	28.2M	28.5M	30.8M
3080	4.2M	9.1M	17.2M	21.8M	19.6M	13.7M

The Air Force is planning to purchase a total of 4768 AN/ARC-190 transceivers. Of this total, MAC is scheduled to receive approximately 2250 units. The 2250 transceivers are scheduled for ACP operation.

8. REFERENCES

"Military Airlift Command Command and Control Master Plan, Volume II, Airlift Concept of Operations" (U), Military Airlift Command, 12 January 1981

"Military Airlift Command Command and Control Programmed Capabilities" (U), Magnavox Data Systems, Inc., 15 June 1981

"Military Aiflift Command Command and Control Functional Needs" (U), Magnavox Data Systems, Inc., 21 August 1981

"Military Airlift Command Command and Control Current Capabilities" (U), Magnavox Data Systems, Inc., 21 August 1981

"Military Airlift Command Command and Control Architectural Study Deficiencies" (U), Magnovox Data Systems, Inc., 2 October 1981, SECRET

"Military Airlift Command Command and Control Architectural Study Alernative Solutions and Recommendations" (U), Magnavox Data Systems, Inc., 18 December 1981, SECRET

"Military Airlift Command Command and Control Architectural Implementation Plan" (U), Magnavox Data Systems, Inc., 10 June 1982

"Military Airlift Command Command and Control Master Plan" (U), Volume I, Military Airlift Command, 3 May 1983, SECRET

MOBILITY C^3 INFORMATION SHEET

SYSTEM KC-10A Interface with MAC

DESCRIPTION

The KC-10A aircraft are assigned to SAC for the primary mission role of aerial refueling. There is an agreement between CINCSAC and CINCMAC concerning the loan of KC-10As to perform an airlift function. Currently KC-10As are equipped with 618T HF radio sets. These sets are compatable with the AN/ARC-190. In addition, there is no plan or funding for modification of the 618T to accept the ACP equipment.

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MOBILITY C^3 INFORMATION SHEET

SYSTEM CRAF

DESCRIPTION

The aircraft in the Civilian Reserve Air Fleet (CRAF) are industry owned and operated assets. The individual owners have entered into contracts with the Air Force to provide the aircraft in times of emergency to perform airlift functions. The Air Force, in turn, has funded for certain modifications to the aircraft such as strengthening of floors, installation of tie down and hard points, and installing wider doors to accommodate DoD standard air cargo shipments.

When CRAF aircraft are activated for airlift service, they are under the control of MAC. The aircraft owner provides the crew but MAC schedules the missions. The communications equipment aboard the aircraft is the standard commercial (FAA) plus any specialized equipment the owner has installed. There are no plans or funding to install additional communications equipment in CRAF aircraft.

AN/ARC-190/ACP
ATCH B
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MAC BASE COMMUNICATIONS

1. DESCRIPTION

Program Element (PE) 41895F, Command Base Communications - MAC, contains the aggregate funding for O & M of MAC administrative communications services worldwide. These services include such items as lease telephone lines, minor equipment rental, Telex service, and other items for day-to-day administrative communications operations. Occassionally minor procurement funding for such an item as a modem for a remote terminal machine may be included.

MILITARY AIRLIFT COMMAND (MAC) COMMAND AND CONTROL (C^2)
ADP

1. DESCRIPTION

The MAC ADP environment revolves around the Base, Aerial Port, and Headquarters levels of processing. The base level processing supports the typical functions performed at an Air Force Base. UNIVAC 1050 II computers are used for the supply function and Burroughs series 3500/3700/4700 computers are used for all other automation activities.

Aerial port passenger and cargo data processing is accomplished by Burroughs 3500 computers at six high volume overseas aerial ports: Yokota AB, JA; Kadena AB, JA; Clark AB, PI; Hickam AFB, HI; Ramstein AB, GE; and Rhein-Main AB, GE. Remotes from the Burroughs 3500 computers are located directly in the terminal cargo and passenger areas to provide manifests for airlift operations. The Aerial Port Documentation and Management (ADAM I) system and the Single Passenger Reservation System (SPRS) are run at the high volume overseas aerial ports. ADAM I supports cargo processing and SPRS supports passenger traffic processing.

Honeywell H716 minicomputers, linked to the Honeywell 6000 Systems 2A and 3A at Scott AFB, provide cargo and passenger data processing at nine high volume CONUS aerial ports. Seven of the ports are the following MAC AFBs: Charleston, Dover, McChord, McGuire, Norton, Scott, and Travis. Lambert International Airport in St. Louis also has one H716, as does Norfolk Naval Air Station. ADAM II is run on System 3A in support of cargo processing. The Passenger Reservation and Manifesting System (PRAMS) operates on System 2A and processes passenger reservations for the high volume CONUS aerial ports.

MAC Headquarters' Honeywell computers are configured as System 1 (four classified H6080 processors), System 2A (one unclassified H6060 processor), System 2B (two unclassified H6060 processors), System 3A (one unclassified H6060 processor), and System 3B (two unclassified H6080 processors). System 1 is dedicated to WWMCCS, JDS support, and classified work (TOP SECRET). It is linked to the rest of the WWMCCS community through the WIN. The MAC 21st and 22nd Air Forces have terminal connectivity to the WIN through System 1.

System 2 is electronically separated into System 2A and System 2B. System 2A is used to manage the passenger movement system, while System 2B is used for Air Force standard programs, program development, and command unique systems.

System 3 also is electronically separated into two systems. System 3A is used to manage cargo operations. System 3B is MAC's command and control computer and is used to run many of the MAC Integrated Management System (MACIMS) unique programs.

Systems 2A, 3A, and 3B communicate with the outside world through AUTODIN. In addition, over 175 terminals located on Scott AFB provide HQ MAC staff with interactive computer support on the H6000 systems. Another 128 terminals connected to the H6000 systems; which are located on MAC bases, aerial ports, and at MAC user locations; provide on-line operational support to a variety of users.

UNIVAC BC-7/700 dual minicomputer systems are used at low volume air traffic terminals. The Interim Terminal Overseas Processing System (ITOPS) is used for documenting cargo and passenger movement at low volume air traffic terminals and runs on the UNVAC BC-7/700 minicomputers.

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Several significant hardware and software changes are envisioned by MAC during the next five to ten years. One will be the transition of the four System 1 H6080 processors to local area network (LAN) technology as part of the new WWMCCS Information System (WIS) architecture. A communications front end processor will provide the MAC WIS LAN with connectivity to the rest of the WIS community.

In the FY87 to FY88 time frame, WWMCCS standard software currently running on MAC's System 1 will be transitioned to the new WIS equipment. A new MAC system that will run on WIS equipment is the Airlift Deployment Analysis System (ADANS). Although the objective of ADANS is to update and enhance the automated airlift planning systems that support deliberate planning, an overall goal of all deployment planning systems is to more closely integrate deliberate planning and deployment execution. The Joint Operations Planning and Execution System (JOPES) also will be run on the WIS equipment. At this time, it is not clear whether JOPES will be just a modernization of the JOPS ADP systems to be run in conjunction with the JDS or if JOPES will replace both the JDS and the current JOPS software.

With the steady growth in war planning and execution planning tasks and the JCS imposed requirement for more responsive course of action (COA) development, MAC requires a larger high speed computer to run FLOGEN, M-14, and other simulations. This computer, known as the Deployment Flow Computer (DFC), will be cleared and will have an on-line interface with the WIS systems through the WIS communications front end processor. The DFC also will interface with the DDN. MAC's goal with the DFC is to achieve a 90 percent reduction in the time required to prepare an airflow using FLOGEN (e.g., reduce the time required to schedule one day from one hour to five minutes).

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An enhanced version of FLOGEN will run on the DFC. In particular, MAC intends to reduce the size of FLOGEN, make it a WWMCCS standard system and transportable to alternate sites, and provide the ability to add, delete, or modify missions within the scheduled period. This last feature will allow manual override to change the schedule in such a way that future scheduling considers the impact of the manual mission changes. MAC has contracted with the Massachussets Institute of Technology (MIT) to explore state of the art (SOA) scheduling logic with the intent of ultimately replacing FLOGEN with a new system.

A second major MAC initiative is to transition the MAC command unique computer systems (Systems 2A, 3A, and 3B) into a command LAN. This transition to new technology will be evolutionary and will be accomplished in several steps. The MAC command unique LAN most likely will consist of a communications gateway known as a Data Management Unit (DMU), distributed processors, and a data base management processor known as a Data Access Processor (DAP).

The DMU, already acquired by MAC and used in a prototype system, will perform the communications functions currently accomplished on the Honeywell mainframes (i.e., controlling CRTs, remote line printers, teletypes, and in this time frame access to the DDN), and will manage and control information transfer within the Consolidated Aerial Port Subsystems (CAPS) network (discussed later). The DMU is a Tandem Non-Stop II system.

The DAP will relieve the processors on the LAN from the burden of the data base functions now performed on the Honeywell mainframes. In particular, the DAP will control data access to MAC data bases, freeing up the CPUs for applications processing.

Initially, the CPUs on the MAC LAN will be the Honeywell processors from Systems 2A, 3A, and 3B. When the Air Force Command ADPE Modernization Program (CAMP) selects an Air Force standard mainframe, the System 2B processors will be reutilized and integrated into the MAC LAN.

The last step envisioned in the evolution of the MAC command unique LAN is replacement of the Honeywell mainframes. This is expected to occur in the post-1988 time frame. The number of CPUs to be included is not known at this time and will be determined by the size and character of the workload.

The Headquarters MAC transition to new hardware will be accompanied by an effort to eliminate the Honeywell dependence of the software systems. In some cases, existing software will be converted, and in other cases, software will be rewritten in a new language such as ADA.

The Consolidated Aerial Port Subsystem (CAPS), an umbrella term for the Passenger Automated Check-In System (PACS) and the Aerial Port Documentation and Management System III (ADAM III), will provide a comprehensive on-line capability for processing and tracking cargo and passengers in the MAC airlift system. CAPS will replace the current ADAM I, ADAM II, SPRS, and ITOPS systems. The Passenger Reservation and Manifesting System (PRAMS) will continue to exist, providing centralized worldwide reservation service at Scott AFB and will interface with PACS. CAPS will employ minicomputers at the high volume CONUS aerial ports, the high volume OCONUS aerial ports, and the low volume air traffic terminals. In some cases, the ports or terminals will possess dual minicomputers, one for the passenger functions and the other for cargo. The minicomputers will be linked to the Scott AFB H6060s for data until MAC replaces the Honeywell hardware. System 2A will continue to support the passenger functions, while System 3A

handles the cargo functions. In addition to the minicomputers, PACS will use CRTs and automated Boarding Pass Printers to process passenger check-ins. ADAM III will use minicomputers, CRTs, and handheld terminals (HHTs) to record cargo data. The HHTs (Motorolla RDX-1000) ultimately will be replaced by light pen wands. The HHTs or light pen wands will reduce labor intensive manual data capture, hand carrying of paperwork, and errors. A prototype system exists using Honeywell Level 6 minicomputers. Developmental work is done at Scott AFB. McGuire and Dover AFBs respectively are demonstrating PACS and ADAM III. Both PACS and ADAM III are being demonstrated at Rhein-Main AB. The DMU manages connectivity to the host Systems 2A and 3B. The Honeywell processors will do minimal processing. If the communications lines to Scott AFB are broken, the minicomputers will have 100 percent manifesting capability and messages to the host H6060s will be queued until communications is restored. Plans for CAPS include remote input/output devices located at the commercial gateways used by MAC.

MAC Plans two field command and control systems: the Theater Airlift Management Systems (TAMS) and the Enhanced Airlift Reporting for Logistics and Operations (EARLO). TAMS will support theater airlift scheduling and EARLO will improve the timeliness and accuracy of reporting via DDN by MAC overseas units to MAIRS, LRCSS, and AIMS. The original concept of TAMS and EARLO called for the two systems to share a minicomputer. MAC is exploring the possibility of using a multi-user microcomputer system for TAMS. TAMS and EARLO will be located at the high volume OCONUS aerial ports and low volume air terminals, plus two mobile units. MAC is developing TAMS and EARLO at Scott AFB and has prototype systems at Hickam, Elmendorf, Ramstein, and Rhein-Main.

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2. OBJECTIVES

The MAC objective is to develop and field distributed data processing systems that will enhance the capability to accomplish peacetime, crisis, and wartime missions.

3. PROPONENT

MAC is the proponent and sponsor.

4. RELATED SYSTEMS

JOPS III	Joint Operational Planning System
JDS	Joint Deployment System
MACIMS	MAC Integrated Management System

An information sheet on the above systems is attached.

5. SCHEDULE

The systems listed in Attachment C are currently operational. CAPS is currently being fielded with a scheduled completion date of FY87. The Information Processing System is to be developed and fielded in the FY84-90 time frame.

6. POINTS OF CONTACT

Col. R. Murphy, HQ MAC, (618) 256-5701
Maj. (LTCOL Sel.) Geoffrey Bishop, AF-SIMCT, 697-1718

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7. FUNDING

The funding profile for the Information Processing System follows:

41840F	FY86	FY87	FY88	FY89	FY90	FY91
3600	3.7M	3.6M	9.2M	9.3M	1.5M	1.7M
3080	0.0	0.0	9.6M	31.5M	48.4M	45.1M

8. REFERENCES

"Military Airlift Command Command and Control Master Plan, Volume II, Airlift Concept of Operations" (U), Military Airlift Command, 12 January 1981

"Military Airlift Command Command and Control Programmed Capabilities" (U), Magnavox Data Systems, Inc., 15 June 1981

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"Military Airlift Command Command and Control Current Capabilities" (U), Magnavox Data Systems, Inc., 21 August 1981

"Military Airlift Command Command and Control Architectural Study Deficiencies" (U), Magnavox Data Systems, Inc., 2 October 1981, SECRET

"Military Airlift Command Command and Control Architectural Study Alternative Solutions and Recommendations" (U), Magnavox Data Systems, Inc. 18 December 1981 SECRET

"Military Airlift Command Command and Control Architectural Implementation Plan" (U), Magnavox Data Systems, Inc., 10 June 1982

"Military Airlift Command Command and Control Master Plan" (U), Volume I, Military Airlift Command, 3 May 1983, SECRET

MOBILITY C^3 INFORMATION SHEET

SYSTEM JDS

DESCRIPTION

The JDS consists of the personnel, procedures, directives, communications systems, and automatic data processing systems required to directly support strategic deployment time-sensitive planning and execution and to complement peacetime deliberate planning of deployment. It supports the overall World Wide Military Command and Control System (WWMCCS) strategic deployment planning process, providing an integrated joint deployment management information system which assists the Joint Chiefs of Staff (JCS), Supported Commanders, and the remainder of the Joint Deployment Community (JDC) in strategic deployment planning, execution, and monitoring. Eventually, the JDS and the Joint Operation Planning System (JOPS), which establishes the policies and procedures for planning and executing strategic military deployments, will be integrated to become the Joint Operation Planning and Execution System (JOPES).

The JDS is built around a centralized integrated deployment master data base established and maintained in the Joint Deployment Agency (JDA) WWMCCS computer system (dual DPS-8 Honeywell CPUs plus ancillary equipment). In its complete form, the JDS data base consists of refined Time-Phased Force and Deployment Data (TPFDD) files and movement tables. A TPFDD file contains time-phased force and transportation data for an OPLAN including: units to be employed, units to be deployed in support of the OPLAN with an assigned arrival priority, routing of forces to be deployed, mobility data associated with deploying forces, nonunit-related personnel and resupply movements, and estimates of transportation requirements. Movement tables

are tables prepared by the Transportation Operating Agencies (TOAs) for each force requirement and each nonunit-related cargo or personnel increment of the TPFDD concerning the scheduled movement from the origin or POE, intermediate location, and POD or destination. In addition to the JDS master data base, distributed data bases at designated WWMCCS sites are incorporated into the JDS through real-time, transaction-oriented, distributed processing. These distributed data bases are subsets of the JDS master data base and support the deployment responsibilities of that site. The principal function of the current JDS is information coordination among members of the JDC.

Because of the dispersed geographic location of the various distributed data bases, their users, and their command unique WWMCCS H6000 computer assets, the JDS relies heavily on the WWMCCS Intercomputer Network (WIN) for data transfer. Each JDS site maintains the currency of data for which it is responsible. As an update is made at a local data base, the JDS automatically generates update transactions throughout the system. This new data is received by other JDS sites in a matter of seconds. Sites which currently have all or a portion of the JDS data base include the following: USPACOM, MAC, HQ Air Force, HQ Army, NMCC, MTMC, USREDCOM, JDA, USAREUR, USEUCOM, US Forces Korea, USAFE, TAC, USLANTCOM, USNAVEUR, USPACAF, and the Air Force Logistics Command. The Chief of Naval Operations (CNO) will receive the JDS at a future date.

The second method of data transfer, via the WIN File Transfer Service (FTS), provides bulk data transfer capability for automated interface with command unique application systems such as MAC's FLOGEN.

AUTODIN is used to transmit automated schedule messages to installations of deploying units. It also provides a backup means for using text formatted messages to update the JDS data base when primary update means are not available.

As the JDS evolves, its information coordinating role will include crisis action planning via the No-Plan System (NPS). The NPS will support timely development of transportation feasible Time-Phased Force and Deployment Data (TPFDD) for situations where no OPLAN exists or existing OPLANs must be modified. The NPS will consist primarily of the Force Module files and the Mode Optimization and Delivery Estimation System (MODES) model. The Force Module files will contain data on a grouping of combat, combat support, and combat service support and sustainment forces linked together or uniquely identified so that they may be extracted or adjusted as a single entity, thus, facilitating planning. The MODES model will function as a transportation feasibility estimator, supporting rapid evaluation of courses of action. MODES will draw upon data from the Force Module files and other sources.

Although the JDS is being developed for use on the current WWMCCS computers, it is a major component of the Conventional Planning and Execution (CPE) functional family of the WWMCCS Information System (WIS) modernization program. The WIS modernization program is scheduled for implementation in the late 1980s.

MOBILITY C^3 INFORMATION SHEET

SYSTEM JOPS III SOFTWARE

DESCRIPTION

Joint Operations Planning System III (JOPS III) is a computer based system designed to improve the effective utilization of existing military resources in preplanned operations and unforeseen time sensitive situations. The system is designed to support the development of OPLANS. JOPS III is designed to operate on a WWMCCS H6000 GSS/M configuration.

A JOPS III data base has been established consisting of the following files:

(1) Aerial Ports and Air Operating Bases (APORTS)
(2) Civil Engineering File (CEF)
(3) Characteristics of Transportation Resources (CHSTR)
(4) Transportation Assets
(5) Port Characteristics (PORTS)
(6) Status of Plans
(7) Deployment Data (DEPDA)
(8) Type Unit Data (TUCHA)
(9) Logistics Factors File (LFF)

File support programs are written in ANSI COBOL and will use the Honeywell 600/6000 ISP (indexed sequential processing).

The JOPS III applications programs consist of the following:

(1) System Monitor (SM)
(2) Force Requirements Generator (FRG)
(3) Movement Requirements Generator (MRG)
(4) Transportation Feasibility Estimator (TFE)
(5) TPFDD Interface (T/I)
(6) Standard Distance Software

(7) Civil Engineering Support Plan Generator (CESPG)

(8) Medical Planning Program (MPP)

These programs access data from the appropriate JOPS III files. Each is a separate program, but some may be combined in use to permit on-line modification and evaluation of planning data. Of particular interest here and briefly discussed below are the FRG, MRG, and TFE programs.

The FRG program provides the military planner with the ability to generate and change Time-Phased Force and Deployment Data (TPFDD) in support of joint operation plans. It may reduce the need for extensive keypunching and batch processing of force and routing data. The FRG produces a TPFDD in the standard Deployment Reporting System (DEPREP) format as a final product.

The MRG provides a capability to generate gross non-unit-related cargo and personnel requirement estimates based upon the forces to be supported and the duration of the planned operation. It uses factors provided by the military planner on a day-by-day basis in developing the requirements for replacement personnel and cargo, including resupply and supply buildup. The program produces data required by the TFE and for Transportation Operation Agency (TOA) unique systems.

The TFE provides automated assistance to the planner in evaluating the feasibility during plan development in terms of strategic movement. The program considers data generated by the other JOPS III programs, such as the forces to be deployed, the cargo and personnel to be moved (both unit- and nonunit-related), PODs, destination, and required arrival dates. The final product of this program is a Time-Phased Transportation Requirements List (TPTRL).

MOBILITY C^3 INFORMATION SHEET

TITLE: MAC C^2 ADP Systems

DESCRIPTION:

MACIMS--MAC Integrated Management System, the MAC umbrella designation, provides:

1. ADAM I (Aerial Port Documentation and Management System I) is a batch processing, card oriented system which supports most of the cargo and mail processing requirements at the high volume overseas aerial ports. ADAM I tells the port manager the status of cargo in the port. The system also provides terminal inventory and produces cargo manifests. ADAM I runs on the Burroughs B3500 computers. If the computer is not located in the cargo terminal, then remote terminals are provided in the cargo areas for entry and query. Summary data for on-hand cargo and cargo moved is provided daily to the MAC numbered Air Forces and HQ MAC via AUTODIN, and stored in the Transportation Information Processing system (TIPS). In Europe, an interface exists between ADAM I and the Department of the Army Movement Management System (DAMMS).

2. ADAM II (Aerial Port Documentation and Management System II) provides port managers of high volume CONUS aerial ports with status information on cargo being handled by the port. The system provides a near real-time automated capability supporting all basic operational and reporting functions associated with the movement of cargo and mail through the aerial ports. ADAM II accepts advanced shipping documents from the Services' Air Clearance Authorities (ACAs) and produces all manifests, intransit data cards and responses to the ACAs for all cargo and mail passing through the port. Each aerial port is supported by a Honeywell 716 minicomputer which handles the remote terminals and provides connectivity to System 3A at Scott AFB via dedicated

communications lines. System 3A's H6060 processor performs all of the processing for ADAM II. Each Service's ACA has a CRT providing on-line connectivity to ADAM II. The ACAs may submit airlift requirements via the CRTs or AUTODIN. ADAM II provides the ACAs with an AUTODIN receipt and lift notice on each shipment under their cognizance as it transits MAC aerial ports. Like ADAM I, ADAM II provides summary data to TIPS.

3. ADAM III, the cargo segment of the Consolidated Aerial Port Subsystem (CAPS), will provide automated cargo processing via CRTs and handheld terminals (HHTs) at the high volume aerial ports and the low volume traffic terminals. The HHTs ultimately will be replaced with light pen wands. The CRTs, HHTs, and light pen wands will reduce data capture time and speed cargo processing and movement by minimizing labor intensive manual data capturing and the handcarrying of paperwork. The automated data capture techniques will reduce errors and make the data immediately available to aerial port managers for making palletization, cargo selection, and load planning decisions. ADAM III will include an automated load planning capability. The data will be passed directly to the host computer at Scott AFB. Cargo receipt and lift information also will be provided to the Service Airlift Clearance Authorities (ACAs).

4. ADANS (Airlift Deployment Analysis System) will be an updated and enhanced automated airlift planning system designed to support the deliberate OPLAN development process. It is included here because of the overall JCS directed goal to more closely integrate deliberate planning and deployment execution. The overall goals are to speed deliberate planning by substantially reducing computer processing time and to increase the accuracy, flexibility, and capabilities for airlift planning and planning analysis. To achieve these goals MAC intends to develop a flow model specifically for ADANS. With this flow model, MAC would be able to model airlift flow at various levels

of detail. At the most detailed level, MAC wants to achieve a more optimal flow that would serve as inputs to the execution process. Several capabilities MAC envisions for the flow model include the following:

(1) Reducing the time required to develop a feasible airlift flow from two weeks to eight hours;

(2) Simultaneous processing of CONUS, intertheater, and intratheater movement requirements;

(3) Efficient tailoring of cargo loads using improved load planning factors;

(4) Allowing for multistop onloads and offloads;

(5) Maintaining unit integrity during movements;

(6) Considering air refueling options; and

(7) Flowing retrograde movement requirements.

In addition to an improved air flow planning capability, ADANS will reduce the time required for processing TPFDD information from eight or ten hours to two hours. The net result of ADANS is that MAC will be better able to conduct preflow movement requirements analyses, more efficiently generate transportation feasible airlift flows, and conduct postflow analyses to include iterative comparisons of possible flows. At this time, MAC intends to have the preflow analysis capability available in FY85, the airlift flow model in FY86, and the postflow analysis capability in FY87.

5. AIMS (Airlift Implementation and Monitoring System) is the key system of MACIMS. AIMS Has three primary functions:

(1) Maintain an accurate and current airlift schedule data base,

(2) Integrate airlift movement data with scheduling information; and

(3) Provide real-time monitoring of mission execution.

AIMS receives schedule data via file transfer from the Integrated Military Airlift Planning System (IMAPS) for exercises or contingency deployments and the Airlift Mission Planning and Scheduling (AMPS) system for channel schedules. The Military Air Integrated Reporting

System (MAIRS) provides AIMS with aircraft movement data. Inputs from MAIRS are made via preformatted AUTODIN messages or CRTs. AIMS runs at its full capability on MAC's unclassified System 3B. Partial capability is available on the classified System 1. When run on System 1, there is limited CRT and remote line printer capability, and no AUTODIN interface. Through on-demand report generation, AIMS provides continuous, command-wide visibility of airlift missions.

6. ARC (Airlift Requirements Collector) is one of four subsystems in the Integrated Military Airlift Planning System (IMAPS). ARC collects airlift requirements from the JOPS data base and creates a consolidated airlift requirements file. ARC provides the airlift requirements to FLOGEN for detailed flows or MACE for gross estimates.

7. CAPS (Consolidated Aerial Port Subsystem) will provide a comprehensive on-line capability for processing and tracking passengers and cargo in the MAC airlift system. CAPS is an umbrella term for the Passenger Automated Check-In System (PACS) and the Aerial Port Documentation and Management System III (ADAM III).

8. FLOGEN (FLow Generator) is one of four subsystems in the Integrated Military Airlift Planning System (IMAPS). The FLOGEN subsystem schedules realistic and executable airlift missions against airlift requirements for small to large sized plans. Actually, there are two versions of FLOGEN: FLOGEN-II and FLOGEN-III. FLOGEN-II was designed specifically to handle small and medium sized war plans and exercises. FLOGEN-III handles large airlift plans. Three other important differences exist between FLOGEN-II and III. First, FLOGEN-II provides the planner with the capability to modify or delete individual missions. FLOGEN-III does not currently have this capability. Second, FLOGEN-III, but not FLOGEN-II, can be stopped and restarted. This allows the planner to plan in one day increments after the first five days have been scheduled and to make adjustments to future movement

requirements. It is important to understand, however, that the effects of manual changes to scheduled missions cannot be incorporated into FLOGEN-III for consideration in scheduling future missions. The third major difference is that FLOGEN-III operates only in a classified environment and pulls data from the JDS via a WIN file transfer. FLOGEN-II can be run on either the classified or unclassified systems. Both versions are composed of two subsystems: Files Maintenance (Files Maintenance Expanded (FMX) for FLOGEN-III) and Scheduler. In both cases, Files Maintenance (or FMX) is an interactive component responsible for building and maintaining all files in an airlift plan. Another function of Files Maintenance (or FMX) is to serve as the control point where specific directives may be entered. The Scheduler component for both versions of FLOGEN creates the airlift schedule based on the data provided by Files Maintenance (or FMX). In addition to its deliberate planning role, FLOGEN also functions as an execution system by continuing to schedule airlift missions, once the deployment has begun, five days in advance. Of the four IMAPS subsystems, only FLOGEN runs in an interactive mode.

9. IMAPS (Integrated Military Airlift Planning System) supports airlift flow planning for contingency, exercise, and war planning. It provides the Military Airlift Command (MAC) with a capability to process airlift requirements received via a JOPS TPFDD or the JDS data base. IMAPS consists of four major subsystems: Airlift Requirements Collector (ARC), Flow Generator (FLOGEN), Military Airlift Capability Estimator (MACE), and Report Generator (REPGEN).

10. ITOPS (Interim Terminal Overseas Processing System) is used for documenting cargo and passenger movement at low volume air traffic terminals. ITOPS runs on dual UNIVAC BC-7/700 minicomputers.

11. LRCSS (Logistics Resource Control and Support System) permits monitoring of aircraft that are delayed by logistics from the time of "break"

to time of aircraft "fix." It is a near real-time system designed to ensure rapid and effective repair of MAC aircraft that break down enroute. The LRCSS contains information such as aircraft tail number, location, arrival time, time delay began, maintenance requirements, estimated time to repair, organizations providing support, and summary information on all aircraft not mission capable. System 3B runs LRCSS. Inputs are entered directly from preformatted AUTODIN messages or telephone calls to the Airlift Divisions (ALDs) where the data can be entered into LRCSS via CRTs. The LRCSS data may be displayed on CRTs or produced as hard copy via printers.

12. MACE (Military Airlift Capability Estimator) provides a gross estimate of airlift schedules for large contingency and war plans. It is designed to provide faster, and consequently less detailed, analysis than FLOGEN. With the advent of FLOGEN-II, MACE is rarely used.

13. MAIRS (Military Air Integrated Reporting System) tracks actual airlift operations on a worldwide basis. MAIRS permits mission following by various echelons within MAC, prior notification of arrivals to enroute stations, and evaluation of mission execution. Inputs are received continuously each day by the MAIRS reporting system via preformatted AUTODIN messages, CRTs, or cards. Data received includes aircraft movement messages (i.e., departure, arrival, delay, recap, advisory, and change messages) and specialized information concerning MAC logistics and aircraft utilization. CONUS USAF air bases submit inputs via CRTs, while overseas USAF bases submit data using AUTODIN messages. MAIRS runs in both batch and on-line modes on System 3B. A standard retrieval system generates a number of reports to assist MAC managers worldwide. These reports can be produced automatically at specified intervals and are available through CRTs, remote line printers, and over AUTODIN. MAIRS provides the JCS, HQ USAF, HQ MAC, and MAC Numbered Air Forces with information including aircraft movements and delays, mission movement delays, aircraft utilization reports, and

summaries of all passenger and cargo requirements and movement data. Current operational data also are provided to AIMS.

14. PACS (Passenger Automated Check-In System), the passenger portion of CAPS, will provide automated passenger processing via CRTs and boarding pass printers at the high volume aerial ports and low volume traffic terminals. The automated capabilities provided by PACS will speed passenger check-in, seat selection, money collection, boarding pass preparation, boarding manifest printing, and flight update processing. PACS will extract data from the centralized worldwide passenger reservation system on System 2A at Scott AFB (i.e., the Passenger Reservation and Manifesting System (PRAMS)). Specifically, PACS will request premanifest data from PRAMS, store this data on the PACS minicomputer, and provide on-line access to the data for passenger check-in. Once additional data is captured to complete passenger check-in, the PACS minicomputer automatically prepares a boarding pass. When all passengers have checked in, PACS produces a boarding manifest. After flight departure, PACS forwards data to Scott AFB for billing and historical recordkeeping.

15. PRAMS (Passenger Reservation and Manifesting System) is a real-time system that schedules the movement of DoD sponsored personnel engaged in international air travel via industrially funded aircraft. PRAMS provides reservations for international passengers traveling outbound from the seven (7) MAC high volume CONUS aerial ports (i.e., Scott AFB, McGuire AFB, Dover AFB, Charleston AFB, McChord AFB, Travis AFB, and Norton AFB) and Lambert International Airport in St. Louis. PRAMS also produces and transmits passenger manifests by departing flights to the aerial ports. All processing is accomplished on the MAC System 2A with links to Honeywell 716 minicomputers at the other locations mentioned above. The Services' personnel movement offices also are provided direct interface to PRAMS by way of on-line remote devices. Local Transportation Management Offices have access to the

system either through AUTODIN messages or phone calls to the Scott AFB Passenger Reservation Center (PRC). Approximately 80 percent of the reservation requests are via AUTODIN. PRAMS handles these directly without human intervention. The system generates responses to these transactions via AUTODIN.

16. SPRS (Single Passenger Reservation System) provides reservations for passengers traveling outside CONUS and from MAC overseas locations back to the CONUS. Decentralized management of overseas reservations is accomplished by the five overseas PRCs (Rhein-Main AB, FRG; Hickam AFB, HI; Yokota AB, JA; Kadena AB, JA; and Clark AB, PI) which share use of the local Burroughs B3500 computers with the ADAM I system. SPRS is a totally batch system. The majority of user interfaces are accomplished through AUTODIN card inputs.

17. REPGEN (Report Generator) subsystem takes the schedule files generated by FLOGEN or MACE and produces movement tables, airlift flow plans, OPLAN Annex C information, and over thirty additional reports. REPGEN may be spawned or run in a batch mode.

18. TIPS (Transportation Information Processing System) is a batch processing system that provides all operating levels with information essential for effective management of airlift resources. TIPS provides current information on the status of movement of cargo, mail, and passengers throughout the worldwide MAC airlift system. TIPS edits, processes, and maintains data on CONUS on-hand cargo, worldwide channel traffic cargo movement, aircraft utilization, and space assignment data form ADAM I, ADAM II, and PRAMS.

The following operational systems also provide or will provide support of MAC C^2:

1. EARLO (Enhanced Airlift Reporting for Logistics and Operations) will improve the timeliness and accuracy of mission reporting via the DDN by MAC overseas units to MAIRS, LRCSS, and AIMS. Users will be able to call up report formats on their CRT and fill in the blanks. The software will edit the report data for accuracy so that it is acceptable by the MAC computer. The report will be output electrically to the communications center for transmittal through the DDN. Standard reports include mission messages, departure or arrival messages, delay messages, and advisory messages indicating the mission will not be performed as scheduled.

2. MAIS (Military Airlift Intelligence System) is a system which electronically interfaces with other DoD intelligence data handling systems.

3. TAMS (Theater Airlift Management System) will improve theater airlift command and control at the theater Airlift Control Centers (ALCCs) and Airlift Divisions (ALDs). TAMS will enable theater airlift managers to create their own local mission schedules and integrate the local schedule with intertheater schedules. TAMS will relieve the administrative burden at ALCCs and ALDs by automating theater mission planning for large numbers of airlift requests, providing decision support aids, and providing for responsive generation of air task orders. TAMS will produce messages for AIMS and MAIRS, using the DDN as the transmission means.

SEALIFT STRATEGIC PLANNING SUBSYSTEM (SEASTRAT)

1. DESCRIPTION

SEASTRAT is a system which is being developed to improve the automated support available to the Military Sealift Command (MSC) for deliberate planning. Its functions include:

a. Accomplishing in-depth feasibility analysis of the sealift portion of CINC OPLANs.

b. Identifying the available ship assets to be used in the planning process.

c. Supporting and identifying the need for Advanced Base Functional Components (ABFCs)

d. Determining annual bunker fuel requirements, and

e. Providing the capability to interface and meet the requirements of CNO, CINCs, JDA, etc.

SEASTRAT is a planned replacement for the Strategic Sealift Contingency Planning System (SEACOP) III, which provides only gross delivery feasibility data and does not possess the necessary interface capability.

The SEASTRAT design consists of four modules: the Analytic Choice of Origin (ANCHOR) module; the Scheduling Algorithm for Improving Lift (SAIL) module; the Pre-Positioned War Reserve Material Requirements (PWRMR) for Petroleum Oil, and Lubricants (POL) module; and the Joint Strategic Capabilities Plan (JSCP) Reports module. The ANCHOR module selects a set of ship locations which are statistically representative for a designated OPLAN or a designated group of OPLANs. The SAIL module uses a transportation network algorithm to optimize a non-linear objective function via iterative linear approximations in order to produce shipping schedules showing both cargo and ship movements for an OPLAN. The PWRMR for POL module deals with the overall requirements for ship-fuel positioning around

the world to support all of MSC's OPLANs. The JSCP Reports module generates the reports that are included in Annex J of the JSCP.

2. OBJECTIVES

The key objective of SEASTRAT is to facilitate the provision of ocean transportation planning support to the exercise, emergency, evacuation, mobilization, and joint operation plans of the JCS, the Military Services and the Unified and Specified commanders.

3. PROPONENT

The proponent of SEASTRAT is MSC. The sponsor is the US Navy (OP04). JDA is a key participant in the program.

4. RELATED SYSTEMS

JOPS III
JDS
An information sheet for the above systems is attached.

5. SCHEDULE

A developmental milestone schedule has not yet been provided to MSC. This information will be made available by NARDAC who is developing SEASTRAT.

6. POINTS OF CONTACT

CAPT. W. Naldrett USN, OPNAV/OP423	695-5139
CDR. J. A. Stuckemeyer, USN, MSC	282-2485
Ms. Katherine Wiswesser, MSC	282-2490

7. FUNDING

The funding for SEASTRAT development is identified under the subject of Sealift Enhancement Surge (PE 48036). These O&M funds are as follows:

FY87	FY88	FY89	FY90	FY91
8.3M	3.2M	3.3M	3.2M	2.8M

MOBILITY C^3 INFORMATION SHEET

SYSTEM JDS

DESCRIPTION

The JDS consists of the personnel, procedures, directives, communications systems, and automatic data processing systems required to directly support strategic deployment time-sensitive planning and execution and to complement peacetime deliberate planning of deployment. It supports the overall World Wide Military Command and Control System (WWMCCS) strategic deployment planning process, providing an integrated joint deployment management information system which assists the Joint Chiefs of Staff (JCS), Supported Commanders, and the remainder of the Joint Deployment Community (JDC) in strategic deployment planning, execution, and monitoring. Eventually, the JDS and the Joint Operation Planning System (JOPS), which establishes the policies and procedures for planning and executing strategic military deployments, will be integrated to become the Joint Operation Planning and Execution System (JOPES).

The JDS is built around a centralized integrated deployment master data base established and maintained in the Joint Deployment Agency (JDA) WWMCCS computer system (dual DPS-8 Honeywell CPUs plus anciilary equipment). In its complete form, the JDS data base consists of refined Time-Phased Force and Deployment Data (TPFDD) files and movement tables. A TPFDD file contains time-phased force and transportation data for an OPLAN including: units to be employed, units to be deployed in support of the OPLAN with an assigned arrival priority, routing of forces to be deployed, mobility data associated with deploying forces, nonunit-related personnel and resupply movements, and estimates of transportation requirements. Movement tables are tables prepared by the Transportation Operating Agencies (TOAs) for

each force requirement and each nonunit-related cargo or personnal increment of the TPFDD concerning the scheduled movement from the origin or POE, intermediate location, and POD or destination. In addition to the JDS master data base, distributed data bases at designated WWMCCS sites are incorporated into the JDS through real-time, transaction-oriented, distributed processing. These distributed data bases are subsets of the JDS master data base and support the deployment responsibilities of that site. The principal function of the current JDS is information coordination among members of the JDC.

Because of the dispersed geographic location of the various distributed data bases, their users, and their command unique WWMCCS computer assets, the JDS relies heavily on the WWMCCS Intercomputer Network (WIN) for data transfer. Each JDS site maintains the currency of data for which it is responsible. As an update is made at a local daa base, the JDS automatically generates update transactions throughout the system. This new data is received by other JDS sites in a matter of seconds. Sites which currently have all or a portion of the JDS data base include the following: USPACOM, MAC, HQ Air Force, HQ Army, NMCC, MTMC, USREDCOM, JDA, USAREUR, USEUCOM, US Forces Korea, USAFE, TAC, USLANTCOM, USNAVEUR, USPACAF, and the Air Force Logistics Command. The Chief of Naval Operations (CNO) will receive the JDS data base at a future date.

The second method of data transfer, via the WIN File Transfer Service (FTS), provides bulk data transfer capability for automated interface with command unique application systems such as MAC's FLOGEN.

AUTODIN is used to transmit automated schedule messages to installations of deploying units. It also provides a backup means for using text formatted messages to update the JDS data base when primary update means are not available.

As the JDS evolves, its information coordinating role will include crisis action planning via the No-Plan System (NPS). The NPS will support timely development of transportation feasible Time-Phased Force and Deployment Data (TPFDD) for situations where no OPLAN exists or existing OPLANs must be modified. The NPS will consist primarily of the Force Module files and the Mode Optimization and Delivery Estimation System (MODES) model. The Force Module files will contain data on a grouping of combat, combat support, and combat service support and sustainment forces linked together or uniquely identified so that they may be extracted or adjusted as a single entity, thus, facilitating planning. The MODES model will function as a transportation feasibility estimator, supporting rapid evaluation of courses of action. MODES will draw upon data from the Force Module files and other sources.

Although the JDS is being developed for use on the current WWMCCS computers, it is a major component of the Conventional Planning and Execution (CPE) functional family of the WWMCCS Information System (WIS) modernization program. The WIS modernization program is scheduled for implementation in the late 1980s.

MOBILITY C^3 INFORMATION SHEET

SYSTEM JOPS III SOFTWARE

DESCRIPTION

Joint Operations Planning System III (JOPS III) is a computer based system designed to improve the effective utilization of existing military resources in preplanned operations and unforeseen time sensitive situations. The system is designed to support the development of OPLANS. JOPS III is designed to operate on a WWMCCS H6000 GSS/M configuration.

A JOPS III data base has been established consisting of the following files:

(1) Aerial Ports and Air Operating Bases (APORTS)
(2) Civil Engineering File (CEF)
(3) Characteristics of Transportation Resources (CHSTR)
(4) Transportation Assets
(5) Port Characteristics (PORTS)
(6) Status of Plans
(7) Deployment Data (DEPDA)
(8) Type Unit Data (TUCHA)
(9) Logistics Factors File (LFF)

File support programs are written in ANSI COBOL and will use the Honeywell 600/6000 ISP (indexed sequential processing).

The JOPS III applications programs consist of the following:

(1) System Monitor (SM)
(2) Force Requirements Generator (FRG)
(3) Movement Requirements Generator (MRG)
(4) Transportation Feasibility Estimator (TFE)

(5) TPFDD Interface (T/I)

(6) Standard Distance Software

(7) Civil Engineering Support Plan Generator (CESPG)

(8) Medical Planning Program (MPP)

These programs access data from the appropriate JOPS III files. Each is a separate program, but some may be combined in use to permit on-line modification and evaluation of planning data. Of particular interest here and briefly discussed below are the FRG, MRG, and TFE programs.

The FRG program provides the military planner with the ability to generate and change Time-Phased Force and Deployment Data (TPFDD) in support of joint operation plans. It may reduce the need for extensive keypunching and batch processing of force and routing data. The FRG produces a TPFDD in the standard Deployment Reporting System (DEPREP) format as a final product.

The MRG provides a capability to generate gross nonunit-related cargo and personnel requirement estimates based upon the forces to be supported and the duration of the planned operation. It uses factors provided by the military planner on a day-by-day basis in developing the requirements for replacement personnel and cargo, including resupply and supply buildup. The program produces data required by the TFE and for Transportation Operation Agency (TOA) unique systems.

The TFE provides automated assistance to the planner in evaluating the feasibility during plan development in terms of strategic movement. The program considers data generated by the other JOPS III programs, such as the forces to be deployed, the cargo and personnel to be moved (both unit- and nonunit-related), PODs, destination, and required arrival dates. The final product of this program is a Time-Phased Transportation Requirements List (TPTRL).

CRISIS MANAGEMENT SUPPORT SUBSYSTEM (CMSS)

1. DESCRIPTION

CMSS will be the primary component of the Military Sealift Command (MSC) Automated Information System Architecture (AISA) and is being developed to implement the information support required by MSC to fulfill its role in the time sensitive planning and execution process. MSC, as a Transportation Operating Agency (TOA), is required to interface directly with the supported Commanders-in-Chief (CINCs) and the Joint Deployment Agency (JDA) during this process. The CMSS will support intensive management of sealift resources through its command and control procedures. Assessment of the availability of sealift resources to support the CINCs will be conducted and procedures executed to obtain and position the necessary sealift assets. Augmentation of the MSC controlled fleet may be necessary and a determination must be made as to the methods to be employed to effect such augmentation. The crisis management function will carry out all coordination to ensure timely and orderly execution of MSC responsibilities in a crisis.

During non-crisis situations the CMSS will be used to direct MSC efforts in testing crisis procedures in deployment exercises and maintaining and updating JCS approved Operational Plans (OPLANS). This system will include all command and control activities at all levels of the MSC organization.

The functions to be performed by CMSS are:

a. Maintaining and updating JCS approved OPLANS.

b. Crisis Action/Time Sensitive Planning in accordance with the JCS JOPS and the JDA Joint Deployment System (JDS).

c. Maintaining and directing the MSC Command and Control Operations.

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d. Planning for and coordination of MSC-wide participation in deployment exercises.

e. Maintaining cognizance over special programs (e.g., OTSR-Optimum Track Ship Routing, AMVER-Automated Merchant Ship Vessel Report, etc.).

2. OBJECTIVES

As the bridge from the peacetime Strategic Planning and Cargo Transportation Subsystems, CMSS will assist the MSC headquarters and area commands in managing the sealift resources in a crisis or contingency environment. Specific objectives are:

a. Plans Maintenance. Provide the facility and automated information support required to maintain and update the MSC portion of JCS-approved OPLANS.

b. Crisis Action/Time Sensitive Operation Planning. Provide the facility and automated information support and application programs to support time-sensitive operational planning and execution complementing the essential functions of the externally maintained JDS.

c. Command and Control

(1) Provide the facility for obtaining required command and control information and maintaining interface to selected operational MSC subsystems and data bases.

(2) Maintain interfaces to external sources for command information such as various intelligence sources and JDA/JDS.

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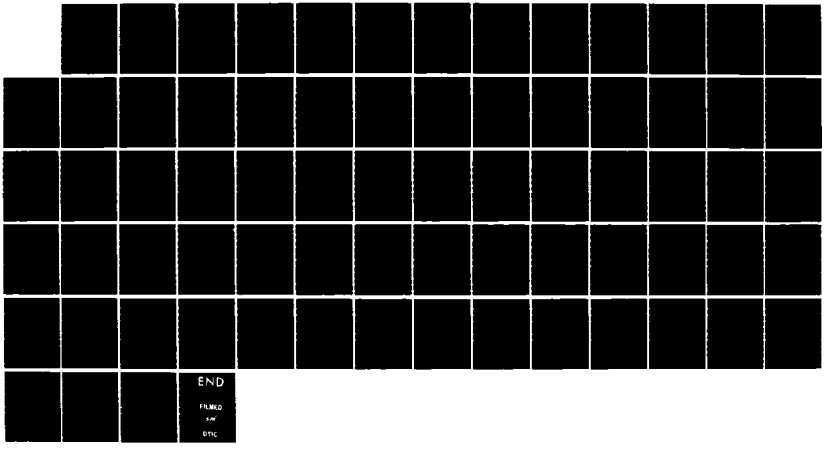

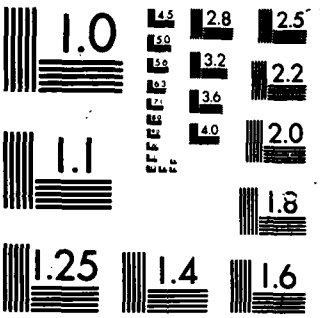

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(3) Provide the facility to generate messages to the various command and control sources required, both internal and external to the Command.

(4) Provide the facility for Command and Control center displays, incorporating interfaces to operational subsystems to display information such as fleet status and schedules, vessel reduced operational status (ROS) to full operational status (FOS) presentations, ship locations and others.

3. PROPONENT

The proponent of CMSS is the Military Sealift Command. The sponsor is CNO (OP04).

JDA is a key participant in the program.

4. RELATED SYSTEMS

The CMSS must be designed to use information from numerous sources. These information needs dictate the establishment of multiple interfaces. While some of these interfaces will be with other AISA components such as the Cargo Transportation Management Subsystem and Strategic Mobility Planning Subsystems, a number of sophisticated interfaces must also be established between external systems operated by other DOD organizations. These include:

a. Navy Command Control and Surveillance Systems

(1) Navy Status of Forces (NSOF)

(2) Anti-Submarine Warfare (ASW)

(3) Unit Tracking (UNITRACK)

(4) Ocean Surveillance Information System (OSIS)

b. WWMCCS Systems

(1) Joint Operation Planning System (JOPS) III

(2) Joint Deployment System (JDS)

An information sheet on the above systems is attached.

5. SCHEDULE

Item	Date
Concept Development Phase	Completed
Preparation for Definition/Design Phase	Completed
Project Completion	FY91

6. POINTS OF CONTACT

Mr. J. Ballou, MSC	282-2260
Ms. Mary Jones, OPNAV/OP04	694-5591
Ms. Cheryl Brown, MSC	427-5622

7. FUNDING

CMSS funds are identified under the subject of Fleet Commands and Staffs (PE 24458N). These O&M monies are as follows:

FY87	FY88	FY89	FY90	FY91
0.0M	3.9M	4.2M	2.9M	1.3M

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MOBILITY C^3 INFORMATION SHEET

SYSTEM ASW

DESCRIPTION

The Anti-Submarine Warfare (ASW) system provides contact analysis information (including merchant ships), and Naval Control and Protection of Shipping (NCAPS) data. The positions of Military Sealift Command (MSC) ships are also maintained by this system as is certain necessary information developed by the Naval Ocean Surveillance Information Center.

MOBILITY C^3 INFORMATION SHEET

SYSTEM JDS

DESCRIPTION

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The JDS is built around a centralized integrated deployment master data base established and maintained in the Joint Deployment Agency (JDA) WWMCCS computer system (dual DPS-8 Honeywell CPUs plus ancillary equipment). In its complete form, the JDS data base consists of refined Time-Phased Force and Deployment Data (TPFDD) files and movement tables. A TPFDD file contains time-phased force and transportation data for an OPLAN including: units to be employed, units to be deployed in support of the OPLAN with an assigned arrival priority, routing of forces to be deployed, mobility data associated with deploying forces, nonunit-related personnel and resupply movements, and estimates of transportation requirements. Movement tables are tables prepared by the Transportation Operating Agencies (TOAs) for

each force requirement and each nonunit-related cargo or personnel increment of the TPFDD concerning the scheduled movement from the origin or POE, intermediate location, and POD or destination. In addition to the JDS master data base, distributed data bases at designated WWMCCS sites are incorporated into the JDS through real-time, transaction-oriented, distributed processing. These distributed data bases are subsets of the JDS master data base and support the deployment responsibilities of that site. The principal function of the current JDS is information coordination among members of the JDC.

Because of the dispersed geographic location of the various distributed data bases, their users, and their command unique WWMCCS computer assets, the JDS relies heavily on the WWMCCS Intercomputer Network (WIN) for data transfer. Each JDS site maintains the currency of data for which it is responsible. As an update is made at a local data base, the JDS automatically generates update transactions throughout the system. This new data is received by other JDS sites in a matter of seconds. Sites which currently have all or a portion of the JDS data base include the following: USPACOM, MAC, HQ Air Force, HQ Army, NMCC, MTMC, USREDCOM, JDA, USAREUR, USEUCOM, US Forces Korea, USAFE, TAC, USLANTCOM, USNAVEUR, USPACAF, and the Air Force Logistics Command. The Chief of Naval Operations (CNO) will receive the JDS at a future date.

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MOBILITY C^3 INFORMATION SHEET

SYSTEM JOPS III SOFTWARE

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File support programs are written in ANSI COBOL and will use the Honeywell 600/6000 ISP (indexed sequential processing).

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MOBILITY C^3 INFORMATION SHEET

SYSTEM NSOF

DESCRIPTION

The Navy Status of Forces (NSOF) system maintains employment schedules and registration information on Navy units.

MOBILITY C^3 INFORMATION SHEET

SYSTEM OSIS

DESCRIPTION

The Ocean Surveillance Information System (OSIS) is an automated ocean surveillance processing system which maintains current deployment positions and historical movements of ships. The information is available for graphic display and manipulation. As reports on the positions of ships are received they are incorporated into a data base and sent to interested users. There are three main subsystems:

a. Communications Processing Subsystem. This subsystem has multiple interfaces including the Navy Command and Control System (NCCS) and Worldwide Military Command and Control System (WWMCCS).

b. Analysis Processing Subsystem. This subsystem provides worldwide map capability, supports various symbology, and provides track projections using dead reckoning. In addition, track and technical data bases are available.

c. Word Processing Subsystem. An integrated message generation capability, including operator defined message headers, flexible editing and data manipulation, and message retransmission capability.

MOBILITY C^3 INFORMATION SHEET

SYSTEM UNITRACK

DESCRIPTION

The location of Military Sealift Command (MSC) ships under the operational control of the Fleet Commanders and the positions of point-to-point MSC controlled ships appear in the Unit Tracking (UNITRACK) system via the MSC movement reports.

MERCHANT SHIP COMMUNICATIONS IMPROVEMENTS

1. DESCRIPTION

The primary mode of communications with most merchant ships is radiotelegraphy. This method has inherent delays of 12-36 hours in the delivery of message traffic to the ships. All communications must be unclassified as no on-line or off-line crypto capability exists on union crewed ships. This is a major deficiency when merchant ships are employed in support of fleet or contingency operations.

Development of the International Maritime Satellite Shipboard Terminal (INMARSAT) equipment has resulted in a capability for real-time communications with merchant ships. This equipment provides teletype and voice service for unclassified traffic only. Additionally, state-of-the-art high frequency (HF) with Simplex Teletype Over Radio (SITOR) equipment is available which can provide a near real-time communications capability to merchant ships. This system is available for unclassified communications through most foreign and domestic Commerical Coastal radio stations and some Coast Guard Communications stations. An off-line Merchant Ship Crypto System (MERCS) has been developed, which consists of a small hand held microprocessor controlled shipboard terminal (called PACE) and a larger companion unit for use at shore installations (called RACE). MERCS is currently undergoing acceptance evaluation by the National Security Agency (NSA).

The merchant ship communications improvements involve the necessary procurement to upgrade the communications capability of all government owned or government controlled merchant ships (e.g., Ready Reserve Fleet (RRF), US Naval Ships (USNS), etc.). The communications equipments which will be installed are INMARSAT (primary communications) and HF/SITOR

(backup communications). Upon certification of MERCS by NSA an enhanced off-line crypto capability will also become available.

2. OBJECTIVES

The objectives of the merchant ship communications improvements are:

a. Provide all US government owned and government controlled merchant ships with a real-time UHF satellite (INMARSAT) voice and teletype communications capability with Commander Military Sealift Command (MSC), MSC area commanders, and (when Naval Control of Shipping (NSC) has been implemented) US Navy Operational Control Authorities (OCA).

b. Provide all US government owned and government controlled merchant ships with an alternate near real-time communications capability, in the event of INMARSAT degradation or failure, through the use of state-of-the-art HF and SITOR equipment.

c. Provide all US government owned and government controlled merchant ships with a state-of-the-art off-line merchant ship crypto system (MERCS) to permit rapid, responsive handling of classified message traffic when required. (Note: Because of security considerations, MERCS will be prepositioned for issue in time of emergency.)

3. PROPONENT

The proponent of the merchant ship communications improvements is the Military Sealift Command. The sponsor is the US Navy (OP 04). Other key participants are:

US Navy (OP 941)
US Maritime Administration (MARAD)
National Security Agency (NSA)

4. RELATED SYSTEMS

INMARSAT will interface with the Defense Communications System (DCS).

5. SCHEDULE

Item	Date
Project Planning	Completed
Requirement Analysis	Completed
Installation	No Schedule

6. POINTS OF CONTACT

CAPT. W. Naldrett USN, OPNAV/OP423 (PEM)	695-5139
Mr. P. Brady, OPNAV/OP941	695-7564
Mr. J. McCoy, MARAD	426-5727
Mr. W. R. Murphy, MSC	282-2032

7. FUNDING

Funds for merchant ship communications improvements, contained in the Sealift Enhancement Program (PE 42198N), are as follows:

FY86	FY87	FY88	FY89	FY90	FY91
4.90M	4.78M	4.75M	4.75M	4.85M	5.00M

8. REFERENCES

Radio Communications Instructions for Merchant Ships Under Naval Control, ACP 149(D), April 1983.

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MOVEMENTS INFORMATION NETWORK (MINET) TESTBED

1. DESCRIPTION

The MINET was a USEUCOM test bed program established to demonstrate the feasibility of an automated system to track cargo movements from CONUS ports of embarkation (POEs) to European ports of debarkation (PODs) and schedule and track cargo movements from in-theater origin to the final destination. The basic technology, including packet switching, electronic mail host operating system, electronic mail software, and selected pieces of hardware which are patterned after the Advanced Research Projects Agency Network (ARPANET), is used in the MINET. Upon completion of the demonstration, the MINET was integrated with the European portion of the Defense Data Network (DDN).

2. OBJECTIVES

The objectives of MINET test bed were to:

a. Refine user-operational concepts through user field tests.
b. Demonstrate and validate the ability of traffic controllers to monitor cargo movements on a near-real-time basis so that those movements can be effectively controlled and coordinated.
c. Demonstrate and validate various technical concepts such as CONUS gateway, dial-up access to the network, and TELEX interface.
d. Assess user acceptance of the total system, including the terminals, protective devices, response times, software compatibility, and system reliability.

e. Assess the technical approach and its components, such as packet switching, protocols, and the computer operating system.

3. PROPONENT

The proponent of the MINET was HQ USEUCOM. The sponsor of the prototype demonstration was the Defense Communications Agency, Europe. The other key agencies and headquarters participating in the program were:

USAREUR
USAFE
USNAVEUR

4. RELATED SYSTEM

The MINET was integrated into the DDN in FY85. Please see attached information sheet on the DDN.

5. SCHEDULE

The MINET test bed demonstration was conducted in four phases and three stages.

	FOC
Stage 1	
Phase 1 Terminal to Terminal Operation	December 1983
Phase 2 Data Base Query	April 1984
Stage 2	
Phase 3 Data Base Update	December 1984
Stage 3	
Phase 4 File Transfer	July 1985

The installation and subsequent user operation of the test bed sites were in three stages.

Stage 1	Installation Completed October 1983
Stuttgart	Bremerhaven
Heidelberg	Rotterdam
Ramstein	London
Ober Ursel	Holy Loch
Stage 2	Installation Completed Early 1984
Rota	Naples
Sigonella	
Stage 3	Installation Completed Late 1984
Athens	Istanbul

6. POINT OF CONTACT

ENS. J. Carey, USN 285-5329
MINET Project Officer, DDN Program Management Office, DCA

7. FUNDING

The MINET test bed was a four year (FY 81-84) project with separate funding provided through Army, Navy, and Air Force Operation and Maintenance (O&M). The MINET became a part of the MILNET (DDN unclassified

network) in FY 85. The funding for FY 85 and beyond is part of PE 33126, DDN. There are no separately programmed funds in support of MINET.

8. REFERENCES

"United States European Command Movements Information Network MINET Test Bed Baseline Concept" (U), Headquarter USEUCOM, December 1982.

MOBILITY C^3 INFORMATION SHEET

SYSTEM DDN

DESCRIPTION

The Defense Data Network (DDN) is designed as a single, integrated packet-switching data network which will provide a low risk, cost-effective system that not only satisfies current requirements, but is easily expandable and adaptable to satisfy requirements projections for the 1990s.

The DDN design is based on proven technology. Most of the hardware, software, and operations and maintenance procedures are adopted or adapted from existing operational networks, notably ARPANET. Switching nodes and subscribers can be added or removed at a low incremental cost and without impacting the operations of the network or the existing subscribers. The switching nodes using the routing algorithms will automatically adapt to the new topologies when their tables are updated.

The switching node, a microprogrammed minicomputer, is the latest generation of packet-switching hardware to use the Interface Message Processor (IMP) software which has evolved over ten years on the ARPANET and similar networks. It is designed for unattended operation and requires no dedicated personnel. Fault diagnosis and software maintenance are centralized at network Monitoring Centers (MC). Terminals will connect to DDN using a microprocessor-based mini-TAC (terminal access controller).

DDN will contain a number of network MCs: a principal System MC, an alternate MC, regional MCs in Europe and the Pacific, and MCs for each keyed community. The MCs monitor the status of the network, provide for

fault isolation and diagnosis, support software maintenance in the nodes and mini-TACs, and maintain information about network elements.

NAVAL CONTROL OF SHIPPING

1. DESCRIPTION

The efficient utilization of merchant ships during a contingency situation or in time of war or national emergency is of paramount importance. Control of shipping, which includes the control over movement of merchant ships at sea such as forming them into convoys as well as the routing, reporting and diverting of both convoys and independents, must be exercised by an organization having comprehensive information concerning the strategic situation if available merchant resources are to be conserved. The Navy has been charged with the overall responsibility of providing effective control of merchant shipping for the United States. The US Naval Control of Shipping Organization (NCSORG) has been designated to accomplish this mission. The actual employment of merchant ships, to include harbor movements, loading and unloading, etc., remains the responsibility of civil shipping authorities. The NCSORG does not have control over the assignment, employment or tactical procedures of convoy patrol, escort forces, antisubmarine warfare, or minesweeping, which are related but separate functions of naval commanders. Additionally, military convoys, as differentiated from mercantile convoys, are outside the purview of the NCSORG.

The NCSORG is constituted so as to be responsive to either a national or Allied emergency. The basic organization, doctrine and procedures of the US and Allied NCSORGs are similar. Actual implementation of the NCSORG requires the mobilization of over 3600 Naval Reservists who are trained and dedicated to the naval control of shipping (NCS) mission. They will man 298 ports in the event of war. In peacetime there are no full time NCS offices, however, there are four active duty Naval officers dedicated to NCS who ensure that all applicable directives are current and have received the proper distribution, serve as Navy and DoD advisor to the Department of

Transportation at Allied Planning Board for Ocean Shipping (PBOS) conferences and, oversee US participation in periodic ocean shipping training exercises.

The operational chain of command for the US NCSORG stems from the JCS through the Unified Commanders and the Fleet Commanders-in-Chief (CINCs) to operational control authorities (OCAs) who are: CINCLANTFLT (OCEANSUBAREA), COMNAVFORCARIB, USCOMEASTLANT, COMTHIRDFLT, COMIDEASTFOR, and COMFAIRMED. These OCAs have operational control of the NCSORG operations in their respective areas and exercise this command at the port level through Naval Control of Shipping Officers (NCSOs) in ports, Reporting Officers (REPTOFs) and Consular Shipping Advisors (CONSAs) at State Posts and, NCS Liaison Officers (NCSLOs) on Allied staffs. The OCAs exercise operational control over the at sea NCSORG component through the convoy commanders who are retired US Navy Rear Admirals, Commodores and Captains with extensive command at sea experience.

The Fleet CINCs, as area commanders are responsible for establishing policy on control and movement of shipping, formation and operation of convoys and, establishing routes for convoys and independents. They also order the institution of military convoys, order shipping control policy and, allocate Naval and Air Forces for the protection of shipping. The OCAs are responsible for control of merchant ship movements, ensuring ships are sailed in convoy or as independents, designating shipping routes, diverting ships and convoys and, arranging for protection of shipping. The NCSOs, REPTOFs, CONSAs, and NCSLOs are the communications link between the OCA and a ship's master. They conduct appropriate pre-sail conferences for all merchants sailing independently or in convoy.

Peacetime administrative control of the NCSORG is exercised by CNO/OP-06N (Commander Military Sealift Command is OP-06N) through the Fleet CINCs. OP-06N's mission is to discharge planning and coordinating responsibilities for the control of merchant shipping, including the review of plans for the

US NCSORG, maintenance of applicable publications and, training of Naval Reservists dedicated to NCS. OP-06N coordinates NCS planning with other OPNAV offices, the Fleet CINCS, the Maritime Administration, the Coast Guard, the State Department, Allied Nations and, NATO Commands.

2. OBJECTIVES

The objectives of the naval control of shipping are:

a. Establish and maintain liaison for shipping matters with all interested civil and military agencies on a national and international level.

b. Coordinate fleet shipping control efforts with other organizations within the DoD and with interested national organizations.

c. Provide for the dissemination of information regarding merchant ship movements to interested national and international agencies.

d. Direct the establishment and maintenance of systems for:

(1) Sailing and routing of merchant ships independently and in convoy.

(2) Reporting and diverting convoys and ships sailed independently.

e. Maintain a worldwide system for plotting convoy and independent merchant ship movements, and physical, military, hydrographic and meteorological impediments that might imperil ships.

f. Establish and maintain a system of prescribed routes throughout the oceans of the world.

g. Publish and distribute documents related to naval control of shipping.

h. Provide for the dissemination of intelligence information to assist the commanders in the discharge of their responsibilities for the control and protection of shipping.

3. PROPONENT

The proponent of naval control of shipping is the Chief of Naval Operations. The sponsor is the US Navy (OP-06N). Other key participants are:

US Navy (OP-941)
Military Sealift Command (MSC)
US Navy (OP-04)
US Maritime Administration (MARAD)
US Coast Guard

4. RELATED SYSTEMS

International Maritime Satellite (INMARSAT) system.
High Frequency (HF) with simplex teletype over radio (SITOR).

5. SCHEDULE

None applicable.

6. POINTS OF CONTACT

Capt. J. A. Fetchko, USN, MSC/M-3R3	427-5691
Capt. W. Naldrett, USN, OPNAV/OP423	695-5139
Mr. P. Brady, OPNAV/OP941	695-7564
Mr. W. R. Murphy, MSC	282-2032

7. FUNDING

The following funding which was outlined in the programmatic summary for merchant ship communications improvements (Sealift Enhancement Program - PE 42198N) is considered to be in direct support of naval control of shipping:

FY86	FY87	FY88	FY89	FY90	FY91
4.90M	4.78M	4.75M	4.75M	4.85M	5.00M

No additional funding has been identified.

8. REFERENCES

Naval Control of Shipping, NAVEDTRA 10830-B, 1983.

Radio Communications Instructions for Merchant Ships Under Naval Control, ACP 149(D), April 1983.

HOST NATION SUPPORT AGREEMENTS

1. DESCRIPTION

Host Nation Support (HNS) is the provision of specific civil and military national assistance during peacetime and wartime to allied forces or organizations which are or are planned to be stationed on host nation territory. The amount and type of HNS which is available to the US, or which the US is willing to accept, varies considerably by world region and is dependent on such factors as host government stability and the magnitude of the current or planned US presence. Associated with HNS is a degree of risk (e.g., reliability of host country nationals in crisis or war, possibility of unstable political climate, impact of underdeveloped infrastructure, etc.) which must be evaluated and a determination made as to the acceptability of this risk or whether US self-sufficiency is dictated. HNS agreements take the form of overall umbrella agreements which are broad scope agreements between governments (e.g., Wartime HNS agreement between the Federal Republic of Germany (FRG) and the US) and implementing HNS agreements which are either general technical agreements identifying terms of reference and functional support areas (e.g., Netherlands lines of communications (LOC) agreement) or detailed technical agreements identifying specific requirements which will be provided by functional area (e.g., FRG provision of troop and equipment transportation from port of debarkation to the assembly area). HNS umbrella agreements have been developed with a number of the NATO allies. The Combined Defense Improvement Program (CDIP) with Korea provides logistical support similar to the HNS within NATO. Negotiations are ongoing with other nations where HNS agreements are deemed acceptable. Development of all required supporting technical agreements is a continuing process.

2. OBJECTIVE

The objectives in acquiring HNS agreements are:

(a) Eliminate the requirement to move personnel and equipments from CONUS in support of reinforcing units during periods of crisis or war. This reduces the burden on the limited number of long haul carriers and results in the reduced response time required by such exigencies.

(b) Minimize the numbers of forward based military and civilian support personnel and associated quantities of equipments thus reducing the overall cost of day-to-day operations.

3. PROPONENT

OSD is the proponent of Host Nation Support agreements. The Services and Theater CINCs are key participants.

4. RELATED SYSTEMS

Not applicable.

5. SCHEDULE

Not applicable.

6. POINTS OF CONTACT

Col. R. Egersdorfer, USA, USAREUR/ODCSHNA	Ext. 6268
Maj. R. Simmons, USA, USAREUR/ODCSLOG	Ext. 8686
Col. M. Nichols, USA, USEUCOM/J4/7	Ext. 5432
Mr. J. M. Compton, OSD/MI&L	695-0271
LTC. Socha, USA, OSD/MI&L	697-3343

7. FUNDING

None identified, however, many supporting technical agreements are currently under development.

HNS
15 July 85

Agreement

between

the Government of the United States of America

and

the Government of the Federal Republic of Germany

concerning

Host Nation Support during Crisis or War

The Government of the United States of America

and

the Government of the Federal Republic of Germany -

conscious of their obligations under the North Atlantic Treaty of April 4, 1949

convinced that the defense capabilities of the North Atlantic Alliance will be enhanced by Host Nation Support during times of crisis or war,

realizing that such support must, to the extent possible, be tested and exercised during peacetime,

and

under the provisions of the Agreement between the Parties to the North Atlantic Treaty Regarding the Status of their Forces (NATO SOFA) of June 19, 1951 and the Agreement to supplement the Agreement between the Parties to the North Atlantic Treaty Regarding the Status of their Forces with respect to foreign forces stationed in the Federal Republic of Germany (Supplementary Agreement) of August 3, 1959, -

have agreed as follows:

Article 1
Type and Extent of United States Reinforcements, Period of Deployment

In times of crisis or war, the Government of the United States of America in agreement with the Government of the Federal Republic

of Germany intends to reinforce its four divisions and associated flying squadrons stationed in the Federal Republic of Germany by an additional six armored, mechanized, and infantry divisions and associated flying squadrons within ten days in order to provide on the day on which combat operations commence or are expected to commence as far as possible ten divisions and associated flying squadrons in the Federal Republic of Germany for successful forward defense. For purposes of this Agreement, the Contracting Parties jointly will determine when a crisis or war occurs. The deployment of such forces will be the subject of consultations between the Contracting Parties and NATO in accordance with Articles 3 and 5 of the North Atlantic Treaty of April 4, 1949.

Article 2
Type and Extent of German Support

In order to facilitate the support of reinforced Armed Forces of the United States of America and their civilian component in the Federal Republic of Germany, the Government of the Federal Republic of Germany intends, subject to technical agreements to be concluded between the Department of Defense of the United States of America and the Federal Ministry of Defense of the Federal Republic of Germany, based on appropriate feasibility studies, to render the Government of the United States of America during times of crisis or war:

1.
Military support through Federal Armed Forces units as described in Annex 1. In peacetime, these units will generally be equipment-holding units which will be activated during times of crisis or war to an approximate strength of 90,000 (estimated), including command, logistic, and training organizations required therefor. This support will include:

a. Security of United States Air Force facilities;
b. Support of United States Air Force elements at collocated operating bases;
c. Airfield repair;
d. Security of United States Army facilities;
e. Transport, transshipment, and resupply services;
f. Evacuation of casualties;
g. Prisoner of war handling;
h. Decontamination of personnel and equipment;
i. Integration of members of the Labor Service of the United States forces stationed in the Federal Republic of Germany, who are under military service obligation in the Federal Republic of Germany, into Federal Armed Forces units activated to support the United States forces.

2.
Civilian support by providing:

a. Transport of personnel, materiel, ammunition, and petroleum, oil and lubricants by rail, road, and waterways;
b. Maintenance and repair services as well as other services, including material handling;
c. Subscriber telephone and teletype equipment;
d. Facilities for wartime stationing;
e. Expendable supplies, and food supplies;
f. Cooperation in meeting the requirements for civilian labor;
g. Exemption from military service for the civilian workforce of the United States forces and of contractors supporting the United States forces;
h. Materiel mobilization augmentation (vehicles, construction and depot equipment).

Article 3
Costs

The costs for support, including the costs for the necessary preparations, based on the cost categories as described in Annex 2, will be shared between both governments, subject to enabling legislation and the availability of funds.

In this connection, the Government of the Federal Republic of Germany will bear the personnel expenses and personal equipment costs of the required Federal Armed Forces units, as well as the materiel investment costs for the military command, logistic, and training organizations of the Federal Armed Forces.

The Government of the United States of America will bear the costs of the materiel investments, to the extent that they are not incurred in connection with the military command, logistic, and training organizations of the Federal Armed Forces; required civilian workforce; and the other costs listed under "Other Operating Costs" in Annex 2. The United States will pay for all goods and services requested and received by its forces in times of crisis or war.

The respective costs will be provided for in the budget plans of both governments beginning with the 1983 budget year.

Both governments will strive for extensive cost limitation. For this purpose, available facilities as well as equipment will be used primarily. Should there be a shortfall in available facilities, both governments will assign high priority to achieve assurance of funding within the NATO Infrastructure Program. Lease, acquisition or construction of additional facilities not funded by NATO will be borne equitably in a manner that reflects the cost-sharing principles outlined above.

All procurements under this Article shall be made on the basis of joint decisions, and in accordance with national laws and regulations of the Contracting Parties. The provisions of this Article shall not require transfer of title or control of United States-owned or funded equipment to the Federal Republic of Germany in peacetime.

Article 4
Joint Committee

A joint committee, co-chaired by a representative of each government, will be established. The joint committee is to be informed of all questions that cannot be solved between the American and German agencies concerned.

Article 5
Implementation Plan

Both governments will develop and coordinate a plan for the implementation of all work related to Host Nation Support during crisis or war. Implementation is scheduled to commence in 1983 and to conclude in 1987. The joint committee annually will review this schedule and the costs provided for in accordance with Article 3.

Article 6
Reinforcement Exercises

The preparation for and execution of reinforcement exercises during peacetime, such as REFORGER, as well as support of exercises by the receiving State will be covered under an agreement to be concluded between the Department of Defense of the United States of America and the Federal Ministry of Defense of the Federal Republic of Germany.

Article 7
Effective Date, Termination

This Agreement will enter into force upon signature by the Contracting Parties. It will remain in force for the duration of the North Atlantic Treaty and may be amended and supplemented at any time upon mutual consent. Amendments and supplements must be in writing.

This Agreement can be terminated by either Contracting Party by giving a twelve-month notice in writing.

Done at Bonn

on April 15, 1982

in two originals in the English and German languages, both texts being equally authentic.

For the Government of the
United States of America

For the Government of the
Federal Republic of Germany

HNS
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ANNEX 1: Military Support Concept

All figures in this annex are the result of model computations. Their exact determination will be made in a technical agreement to be concluded after completion of feasibility studies (Article 2).

Support Area	Requested Support for US Forces	Organization	Intended Implementation Personnel Peacetime Strength Military	Civilian	Reserve Training Spaces	Wartime Strength
Security of USAF Facilities	Security of 18 sites	12 Motorized Infantry Battalions 3 Home Defense Companies 10 Security Platoons	39	66	130	13,376
Collocated Operating Bases (COB)	Support operations at 13 German airfields	Material and personnel augmentation of existing Air Force and Navy units at 13 COBs	65	40	115	8,617
Airfield Damage Repair (ADR)	Damage repair at 26 airfields	26 Airfield Damage Repair Squadrons	13	49	68	6,074
Security of US Army Facilities	Security of 39 sites	11 Home Defense Companies 28 Security Platoons	16	32	30	3,941
Transport and Transshipment	Daily - Transport of 6,800 tons of material and 7000 cubic meters of petroleum, oil, and lubricants - Transshipment of 72,200 tons	7 Headquarters and Service Companies 8 Transshipment Companies 6 Transportation Truck Companies 3 Maintenance Evacuation Companies 3 Petroleum, Oil & Lubricant Truck Companies	123	39	8	4,976

Support Area	Requested Support for US Forces	Organization	Intended Implementation Personnel Peacetime Strength Military	Civilian	Reserve Training Spaces	Wartime Strength
Resupply I	Reinforcement of existing US supply organizations	3 Supply Battalions	9	15	5	3,102
Resupply II	Reinforcement of US support organizations to be activated in case of mobilization	21 Headquarters and Service Companies 43 Supply Companies 16 Petroleum, Oil & Lubricant Truck & Operating Companies 8 Transportation Truck Companies 7 Transshipment Companies 6 Maintenance Evacuation Companies	51	72	27	17,911
Evacuation of Casualties	Evacuation of up to 1,725 casualties daily	5 Medical Evacuation Battalions	20	30	6	3,935
Prisoners of War Handling	Handling of up to 200 prisoners of war daily	1 Prisoner of War Guard/ Service Battalion	3	2	2	596
Decontamination	Decontamination daily of up to - 34,000 persons - 2,700 vehicles	5 Nuclear, Biological and Chemical Defense Battalions	15	25	24	3,690

Support Area	Requested Support for US Forces	Organization	Intended Implementation				Wartime Strength
			Personnel				
			Peacetime Strength				
			Military	Civilian	Reserve Training Spaces		
Labor Service	Integration of members of Labor Service and their tasks into Federal Armed Forces units	7 Headquarters and Service Companies 17 Home Defense Companies 11 Guard and Security Platoons 24 Transshipment Companies 14 Maintenance Companies 1 Transportation Truck Battalion 1 Transportation Company 1 Signal Battalion 1 Signal Operating Company 16 Engineer Companies 1 Engineer Platoon 5 Supply Companies	31	-	82		16,434

Support Area	Requested Support for US Forces	Organization	Intended Implementation Personnel Peacetime Strength Military	Civilian	Reserve Training Spaces	Wartime Strength
Required Military Command, Logistic, and Training Organizations	Command, Logistics, and Training of HNS units	3 HNS Commands 6 HNS Regiments 2 HNS Regiments (Labor Service) 6 Training Centers 7 Field Replacement Battalions 7 Maintenance Control Elements 8 Supply, Maintenance or Services Companies 25 Liaison Teams 4 Materiel Issue Points 1 Oxygen Generating Team 1 ADR Training Squadron (70 % of which used for HNS)	822	228	40	10,677
		Augmentation of existing organizations in the Federal Armed Services and the Federal Armed Forces Administration				
		Total:	1,207	598	537	93,329

Annex 2

COST CATEGORIES

Annual Operating costs

Military personnel, including:
- Pay and allowances

Civilian personnel, including:
- Pay and allowances

Other operating costs, including:
- Operation and maintenance of
  - Materiel
  - Facilities
- General administration

Investment costs

Material, including:
- Personal equipment
- Unit equipment
- War reserves

Facilities, including:
- Storage
- Accomodation
- Administration
- Training
- Maintenance / Repair
- Local utilities

COAST GUARD DEPLOYMENT

1. DESCRIPTION

Title 14 US Code provides for transfer of the Coast Guard from the Department of Transportation to the Department of the Navy, as a specialized service, in time of war or when directed by the President. Upon transfer, the Coast Guard assumes responsibility for two categories of tasking. First, they continue to carry out their federal functions and regulatory responsibilities. These are: operation and maintenance of short range aids to navigation and radio-navigation aids, bridge administration, commercial vessel safety, enforcement of laws and treaties, ice operations, marine environmental response, marine science activities, port and environmental safety, recreational boating safety and, search and rescue (SAR). In time of emergency or war, the defense related functions, particularly those which impact heavily on strategic mobility and the ability to defend our national resources, receive the highest priority. Those with little or no relationship to defense, such as recreational boating safety, would essentially be eliminated. In the second category of tasking, the Coast Guard supports national objectives through tasking from the Chief of Naval Operations. The following missions are currently assigned: military SAR, anti submarine warfare (ASW) ocean escort operations, inshore undersea warfare support, surface surveillance and interdiction, ice breaking operations in support of military operations and scientific outposts, aids to navigation for operations in forward areas, operation of radio navigation aids such as LORAN C and OMEGA in accordance with the JCS master navigation plan, explosive ordinance loading supervision in overseas operational theaters, regulation and control of dispersal anchorage areas, shore-based ship to shore communications services for US controlled and allied merchant ships, control of radio stations aboard merchant ships in port to ensure that proper communications security and procedures are observed, control of

maritime pilotage, control of fishing vessels and small craft to ensure they remain clear of unsafe areas or areas of planned naval operations, protection of locks and dams in strategically significant waterways, mine countermeasures, naval control of shipping assistance and, coastal defense in ports and port approaches.

The Coast Guard's unique capability to contribute to strategic mobility lies primarily in its regulatory authority and experience both in ports and with the maritime industry in the enforcement of regulations. The Military Traffic Management Command (MTMC) and the Military Sealift Command (MSC) rely on the Coast Guard for the maintenance of the safety and security of port facilities and labor obtained through commercial contract. In response, the Coast Guard brings its full regulatory powers to bear on the protection of port operations under the commercial vessel safety and port and environmental safety programs. No service or agency within DoD has comparable authority.

The Coast Guard's larger classes of ships, such as the Hamilton Class 378' high endurance cutters and Hero Class 270' medium endurance cutters are committed to ASW and ocean escort operations with the Navy. Other medium endurance cutters and patrol boats would operate in support of Navy efforts in shallow water ASW, anti-swimmer operations, mine countermeasures, and harbor defense. The Coast Guard also would employ their multimissioned platforms for surface surveillance and interdiction within the littoral region and inland waterways.

The Coast Guard command, control, and communications (C^3) community of interest consists of a mix of civilian and government users. As a result a communications capability must be maintained to satisfy national and international maritime commitments, secure communications systems for DoD interfaces must be operated, and Service unique communications systems to effect internal administration and management must be employed. The Coast Guard's communication and radio stations provide all telegraphy (CW) service to the Navy including MSC chartered vessels. The Coast Guard Telecommunication

System (CGTS) has become a complement to the Naval Telecommunication System (NTS), extending non-secure, defense oriented communication services to the US Merchant Flag fleet on a global basis. Communicating with merchant ships for safety of life at sea has long been a Coast Guard role. Collection of weather observation from vessels at sea is another Coast Guard C3 support service provided to the National Weather Service. As a corollary, the Coast Guard also disseminates the weather forecast information to vessels of all nations.

The Coast Guard operates nine long range communication and radio stations. The system control stations in both oceans are connected with their respective Navy counterparts (Naval Communication Area Master Stations (NAVCAMS)) for exchange of messages, alternate sharing of assets, and system coordination. Access is also available to the Automatic Digital Network (AUTODIN), Automatic Voice Network (AUTOVON), Automatic Secure Voice Network (AUTOSEVOCOM), and Worldwide Military Command and Control System (WWMCCS) Intercomputer Network (WIN).

Other Coast Guard unique communications are: the Operational Digital Network (ODIN) which is a low speed (100 wpm) non-secure teletype network interconnecting all districts and the headquarters communication centers with an Atlantic to Pacific cross-connect. The network is used for SAR and unclassified internal Coast Guard traffic; the Secure Command and Control Network (SCCN) is a low speed teletype network utilizing KW-7 crypto devices. It connects each district communications center, appropriate radio and communications stations, and Naval Telecommunications facilities. SCCN carries the majority of the Coast Guard's internal classified message traffic and provides service for coordination of sensitive law enforcement and military operations; the LORAN C control network is a low speed, non-secure teletype network utilized for control of the 39 LORAN C stations operated by the Coast Guard. LORAN C is one of the primary means of navigation for vessels and aircraft.

COAST GUARD
15 July 1985

The Coast Guard utilizes a number of key ADP application programs in the conduct of their mission. The Automated Mutual-Assistance Vessel Rescue System (AMVER) is a merchant vessel tracking program providing a file of current ocean voyages for use in emergency or distress situations. Information from AMVER is provided to internationally recognized search and rescue agencies for location of the nearest merchant vessels to aid a ship in trouble. Computer Assisted Search Planning (CASP) is an automated search and rescue planning tool for the SAR mission coordinator. The ICEPLOT contains a file of icebergs in the North Atlantic and produces predictions on their movement. This information is disseminated as broadcast warning messages to shipping.

2. OBJECTIVE

The objective in the preparation for Coast Guard deployment is to provide for a smooth and rapid transition from day-to-day operations within the Department of Transportation to operations as a special service within the Department of the Navy when directed. This is being accomplished by:

a. Formal designation of mutually agreed upon mission areas for which the Coast Guard will either assume full responsibility or have the responsibility of performing a supporting role.

b. Routinely exercising these pre-assigned mission areas with the Navy.

c. Ensuring commonality of C^3 equipment, training, support, and operation by consolidation of Coast Guard and Navy requirements.

3. PROPONENT

The proponent of Coast Guard deployment is the US Navy. The sponsor is the US Coast Guard. Other key participants are:

MSC
MTMC
US Maritime Administration (MARAD)
US Navy (OP-941)

4. RELATED SYSTEMS

AMVER
AUTODIN
AUTOSEVOCOM
AUTOVON
CASP
CGTS
ICEPLOT
LORAN C
NTS
ODIN
SCCN
WIN

5. SCHEDULE

None applicable.

COAST GUARD
15 July 1985

6. POINTS OF CONTACT

LCDR. S. FOX, USCG, HQ USCG/G-TPP-2	426-1345
CAPT. GRADY, USCG, HQ USCG/PORT SAFETY	426-1934
CDR. J. A. CREECH, USCG, HQ USCG/MOBILIZATION PLANS	426-2025
CDR. R. LOSEA, USCG, HQ USCG/NAVSEA (91G) LIAISON	426-1356
MR. J. LOMBARD, HQ USCG/AMVER	426-1933
MR. P. BRADY, OPNAV/OP 941	695-7564
LCDR. S. CORCORAN, USCG/NAVOP 321 LIAISON	695-4671
CDR. L. BRIGHAM, USCG/NAVOP 605E LIAISON	695-9240

7. FUNDING

No DoD funding identified.

8. REFERENCE

Coast Guard Telecommunications Plan, Commandant Instruction M2000.4 (U).

COAST GUARD
15 July 1985

MOBILITY C^3 INFORMATION SHEET

SYSTEM AMVER

DESCRIPTION

The Coast Guard's Automated Mutual Assistance Vessel Rescue (AMVER) system is a worldwide vessel plotting program which is designed to maintain and provide information on vessels for use in Search and Rescue (SAR) operations. Any merchant vessel of one thousand gross tons or more on a voyage of greater than twenty-four hours to anywhere on the globe is welcome in the AMVER system. International participation is generally considered to be voluntary, however, in accordance with a US Maritime Administration (MARAD) regulation effective August 1, 1983, all US flag vessels of one thousand gross tons or more, operating in foreign commerce and foreign flag vessels of one thousand gross tons or more, for which an interim war risk insurance binder has been issued by the US Government under the provisions of Title XII, Merchant Marine Act of 1936, are required to report in the AMVER system. Prior to implementation of the 1983 MARAD regulation, these classes of vessels were required to report similar information in MARAD's now defunct US Merchant Vessel Locator Filing System (USMER).

To participate in AMVER a vessel need only send (free of charge) its sail plan and periodic position reports. This information is then entered into the AMVER computer which is programmed to calculate ships' positions by dead reckoning (DR) based upon most recent information. When a recognized rescue center of any nation learns of an emergency it is encouraged to obtain a computer predicted listing of ships in the vicinity to see which is best suited to provide help. Valuable search and rescue data such as each ships' radio watch schedule and whether she carries a doctor is kept on file by AMVER and printed out for each ship listed. The DR location of an individual vessel, if participating, may also be obtained by rescue authorities if her safety is in question. Predicted vessel locations are disclosed only for reasons related to maritime safety.

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The AMVER system has received international endorsement from both the 1960 Safety of Life at Sea (SOLAS) Conference and the Inter-Governmental Maritime Consultative Organization (IMCO).

MOBILITY C^3 INFOMATION SHEET

SYSTEM CASP

DESCRIPTION

The Coast Guard's Computer Assisted Search Planning (CASP) system is a series of computer programs that use the simulation method to solve the search planning problem. The simulation method takes into account the uncertainties or inaccuracies in the input and gives a large number of answers or datum points. These datum points can then be mapped to provide a graphic picture of all possible locations. CASP is best used when information concerning a particular case is vague such as the incident position not being fixed, time of distress is approximate, or the controller has a great deal of other information which does not fit standard Search and Rescue (SAR) methods. The system can easily be updated for new drift data, previous searches accomplished, and evaluation of search plans. Displays of usable output can be obtained at any time.

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MOBILITY C^3 INFORMATION SHEET

SYSTEM ICEPLOT

DESCRIPTION

The Coast Guard in its mission as the International Ice Patrol (IIP) forecasts the location of icebergs in the western North Atlantic Ocean during the Spring of each year. The iceberg positions are broadcast every twelve hours to warn ships at sea of the ice danger. The iceberg position forecasts are accomplished by visually observing the ice from aircraft and then predicting its drift between observations. Unfavorable weather conditions, particularly fog, often prevents visual observations for two or more weeks, making the quality of the iceberg warnings dependent largely upon the ability to predict the drift of an iceberg over extended periods of time.

A computer model called ICEPLOT to predict the drift of an iceberg has been developed and tested for operational use by the IIP. The model employs differential equations which balance the iceberg acceleration with the water drag, the air drag, the Coriolis acceleration and a sea surface slope term. The air drag is determined from prognosis wind data supplied by the US Naval Fleet Numerical Weather Central.

Testing of the model using observed drifts of icebergs indicates that the model error remains relatively constant for drift periods of up to three weeks duration.

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CONTINENTAL ARMY MANAGEMENT INFORMATION SYSTEM (CAMIS)

1. DESCRIPTION

The Continental Army Management Information System (CAMIS) is being developed to support Army Reserve and Army National Guard mobilization and day-to-day operations. It will be a fully automated system which will provide commanders in the mobilization community[1] with accurate, timely, and readily accessible unit readiness information such as total personnel manning levels, required military operational specialty levels, equipment operational status, equipment deficiencies, and training status. This in turn will increase the reliability of mobilization planning data and expedite mobilization upon execution. Also, it will improve peacetime command and control, reduce routine administrative time, and enhance unit training readiness. The existing manual systems at the Reserve Component organizational level occupy 25 to 30 percent of each training period and produce limited information that is generally 30 to 90 days old. The findings of every mobilization exercise (MOBEX) conducted by the Army have repeatedly stressed the critical requirement for a fully automated system, such as CAMIS, to effect successful mobilization planning and execution, and to support deployment.

To the maximum extent feasible the CAMIS unclassified processing, communications, and hardware requirements are to be satisfied using the Vertical Installation Automation Baseline (VIABLE) resources. VIABLE, when completed, will be a non-secure, integrated, computer network designed around five strategically located, Continental US, Regional Data Centers .

1 The mobilization community includes, but is not limited to, US Army Forces Command, Continental US Armies, Readiness Groups, Mobilization Stations, Major US Army Reserve Commands, National Guard Bureau Headquarters, State Adjutants General, and Troop Program Units located at US Army Reserve Centers and Army National Guard Armories.

(RDCs). The RDCs will be connected by multiple high speed communication lines in a ring configuration allowing each to provide back-up capabilities for the other. VIABLE will provide the mainstay of support for the Standard Army Multicommand Management Information System (STAMMIS). VIABLE is generally intended to support the Active Component at the installation level.

All CAMIS classified processing, communications, and hardware requirements are to be satisfied, where feasible, by the secure processing resources of the Vertical Force Development Management Information System (VFDMIS). VFDMIS, when completed, will be a secure computer network consisting of up to five secure Regional Processing Centers (RPCs) with a capability for data interchange with the VIABLE RDCs. Provisions have been made for up to 650 Remote Access Facilities (RAFs) for worldwide user access. The Defense Data Network (DDN) will support data interchange between the RPCs and RAFs. VFDMIS is generally intended to support the active component down to the unit level.

CAMIS will have four functional systems designed to support the Reserve Component peacetime operation; provide the ability for the Reserve Component and Active Component mobilization; and once mobilization occurs, give the Army real-time information so that the now all-active forces can be moved, redistributed as required, and deployed. The four systems are the Army Reserve Force Management (ARFM) system, the Army National Guard Force Management (ARNGFM) system, the Mobilization Readiness Management (MRM) system, and the Mobilization Management (MM) system. The ARFM and ARNGFM will support mobilization planning and improve peacetime command and control by providing for the day-to-day operations of personnel, accounting, material and facilities management, budgeting, funds control, recruiting, retention, and training management. The MRM will provide the Reserve Component the capability to develop realistic movement plans, identify personnel and equipment shortages and overages in both the Reserve and Active Components, and develop detailed redistribution plans. The MRM

redistribution planning will use the real-time personnel and logistics data from the ARFM and ARNGFM systems. The MM system will provide the mobilization and deployment information required within and external to CAMIS. This system will use information from the ARFM, ARNGFM, and MRM systems to enable the Reserve Component commanders and Mobilization Stations to monitor Reserve Unit execution of mobilization. Instruction and Assistance can then be provided by these commands as required.

2. OBJECTIVE

The objective of CAMIS is to provide an information processing tool to commanders and functional managers in the mobilization structure. This tool should enable them to obtain accurate, timely, readily accessible unit readiness information for peacetime command and control, readiness assessment, mobilization planning and execution, and deployment support.

3. PROPONENT

Department of the Army (DCSOPS) is the proponent and sponsor of CAMIS. Other key participants include:

(1) US Army Forces Command (FORSCOM),
(2) Army Reserve Commands, and
(3) Army National Guard Commands.

4. RELATED SYSTEMS

VIABLE
VFDMIS
DDN

An information sheet for each system is attached.

5. SCHEDULE

RFP Issued June 1984.

6. POINTS OF CONTACT

To be provided

7. FUNDING

To be provided

MOBILITY C^3 INFORMATION SHEET

SYSTEM VIABLE

DESCRIPTION

The Vertical Installation Automated Baseline System (VIABLE) is an integrated national computer network designed around five Regional Data Centers (RDCs) strategically located near Washington, D.C.; Atlanta, Georgia; Radcliff, Kentucky; Killeen, Texas; and Monterey, California. It is the foundation of the unclassified sustaining base automation architecture for the US Army in the continental United States. The five RDCs are tied together by multiple high-speed communication lines in a ring configuration. This allows the RDCs to provide back-up capabilities for one another. VIABLE RDC resources shall provide the mainstay of support for the majority of Army Standard Management Information Systems (STAMMIS). VIABLE is generally intended to support the active Army component at the installation level.

MOBILITY C^3 INFORMATION SHEET

SYSTEM VFDMIS

DESCRIPTION

The Vertical Force Development Management Information System (VFDMIS) is a computer network designed to support the Army's long-term secure processing requirements. Two physically-separate secure Regional Processing Centers (RPCs), one in the National Capital Region and an option for another located west of the Mississippi, are specified as the initial secure processing resources of VFDMIS. A further option for three additional RPCs located in the immediate vicinity of other Vertical Installation Automated Baseline System (VIABLE) Regional Data Centers (RDCs) is available. A VFDMIS training center at Fort Lee, Virginia and up to 650 Remote Access Facilities (RAFs) for worldwide user access to the secure processing resources are also specified. Mechanisms will be included in the secure processing resource capabilities for implementation of data interchange between the secure RPCs and the VIABLE RDCs. The Defense Data Network (DDN) will provide the communication support for data interchange between the secure RPCs and user remote access facilities. VFDMIS is generally intended to support the active component down to the unit level.

MOBILITY C^3 INFORMATION SHEET

SYSTEM DDN

DESCRIPTION

The Defense Data Network (DDN) is designed as a single, integrated packet-switching data network which will provide a low risk, cost-effective system that not only satisfies current requirements, but is easily expandable and adaptable to satisfy requirements projections for the 1990s.

The DDN design is based on proven technology. Most of the hardware, software, and operations and maintenance procedures are adopted or adapted from existing oeprational networks, notably ARPANET. Switching nodes and subscribers can be added or removed at a low incremental cost and without impacting the operations of the network or the existing subscribers. The switching nodes using the routing algorithms will automatically adapt to the new topologies when their tables are updated.

The switching node, a microprogrammed minicomputer, is the latest generation of packet-switching hardware to use the Interface Message Processor (IMP) software which has evolved over ten years on the ARPANET and similar networks. It is designed for unattended operation and requires no dedicated personnel. Fault diagnosis and software maintenance are centrlaized at network Monitoring Centers (MC). Terminals will connect to DDN using a microprocessor-based mini-TAC (terminal access controller).

DDN will contain a number of network MCs: a principal System MC, an alternate MC, regional MCs in Europe and the Pacific, and MCs for each keyed community. The MCs monitor the status of the network, provide for fault isolation and diagnosis, support software maintenance in the nodes and mini-TACs, and maintain information about network elements.

MOBILITY C^3 ACRONYMS

AALPS	Automated Air Load Planning System used by XVIII ABN Corps
ABFC	Advanced Base Functional Components (Navy)
ACA	Airlift Clearance Authority
ACP	Automatic Communications Processor (formerly SELSCAN) (Air Force)
ACP	Allied Communications Publication
ADANS	Airlift Deployment Analysis System (Air Force)
ADDS	Army Data Distribution System. An information system being developed at Ft. Bragg, NC.
ADP	Automated Data Processing
AFR	Air Force Regulation
AIMS	Airlift Implementation and Monitoring System (Air Force)
AISA	Automated Information System Architecture (Navy)
ALCC	Airlift Control Center (Air Force)
ALD	Airlift Division (Air Force)
AMC	US Army Materiel Command (formerly DARCOM)
AMPS	Airlift Mission Planning and Scheduling System (Air Force)
AMVER	Automated Mutual-Assistance Vessel Rescue System. (Coast Guard)
ANCA	Allied Naval Communications Agency. (NATO)
ANCHOR	Analytic Choice of Origin. A module of SEASTRAT (Navy)
ANMCC	Alternate National Military Command Center
ANSI	American National Standards Institute

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APORTS	Aerial Ports and Air Operating Bases. (Air Force)
AR	Army Regulation
ARC	Airlift Requirements Collector. (Air Force)
ARFM	Army Reserve Force Management system
ARNGFM	Army National Guard Force Management system
ARPANET	Advanced Research Projects Agency Network
ASCII	American Standard Code for Information Interchange
ASPUR	Automated System for Processing Unit Requirements. A system being developed within the Military Traffic Management Command to process information related to the deployment of units.
ASW	Anti-Submarine Warfare (Navy)
AUEL	Automated Unit Equipment List. An automated listing of shipment units in an Army unit, together with associated transportability data. Derived from the COMPASS data base.
AUTODIN	Automatic Digital Network
AUTOSTRAD	Automated System for Transportation Data. The acronym for all information systems operated by MTMC.
BDE	Brigade
BES	Budget Estimate Submission
BN	Battalion
C^3	Command, Control, and Communications
CAMIS	Continental Army Management Information System
CAMP	Command ADPE Modernization Program (Air Force)
CAMS	Crisis Action Management System. A system being developed by MTMC for time sensitive planning and execution.
CAPS	Consolidated Aerial Port System (Air Force)

CAS	Crisis Action System. The JCS system for time sensitive planning.
CASP	Computer Assisted Search Planning. (Coast Guard)
CCEC	Command and Control Engineering Center (DCA)
CDIP	Combined Defense Improvement Program (OSD)
CDS	Civil Direction of Shipping
CEF	Civil Engineering File (Navy)
CESPG	Civil Engineering Support Plan Generator
CGTS	Coast Guard Telecommunication System
CHSTR	Characteristics of Transportation Resources
CINC	Commander-in-Chief
CINCLANTFLT	Commander-in-Chief Atlantic Fleet (Navy)
CMSS	Crisis Management Support Subsystem. A system being developed by MSC for time sensitive planning and execution. (Navy)
CNO	Chief of Naval Operations
COBOL	Common Business Oriented Language
COMFAIRMED	Commander Fleet Air Mediterranean (Navy)
COMIDEASTFOR	Commander Middle East Force (Navy)
COMNAVFORCARIB	Commander Naval Forces Caribbean Area (Navy)
COMPASS	Computerized Movement Planning and Status System. An information system at Hq. US Army Forces Command which contains unit movement data.
COMPES	Contingency Operations/Mobility Planning and Execution System. A management information system used within the Air Force at both the major command and base level to manage deployment planning and deployment operations. At the base level, it replaces the Base Automated Mobility System (BAMS).

COMTHIRDFLT	Commander Third Fleet (Navy)
CONSA	Consular Shipping Advisor
CONUS	Continental United States. Refers to the 48 states excluding Hawaii and Alaska.
CPE	Conventional Planning and Execution
CPU	Central Processing Unit
CRAF	Civilian Reserve Air Fleet
CRT	Cathode Ray Tube
CW	Continuous Wave
DAAS	Defense Automatic Addressing System
DAMMS	Department of the Army Movement Management System
DAP	Data Access Processor
DARCOM	US Army Materiel Readiness And Development Command (Now AMC)
DARPA	Defense Advanced Research Projects Agency
DBA	Data Base Administrator
DBMS	Data Base Management System
DCA	Defense Communications Agency
DCS	Defense Communications System
DDN/MILNET	Defense Data Network Military Network
DEPDA	Deployment Data
DEPREP	Deployment Reporting System
DF	Data Flow
DFC	Deployment Flow Computer (Air Force)

DMES	Deployable Mobility Execution System. A prototype information system for aircraft load planning (Air Force)
DMU	Data Management Unit (Air Force)
DR	Dead Reckoning
DTO	Division Transportation Office
EARLO	Enhanced Airlift Reporting for Logistics and Operations (Air Force)
EOC	Emergency Operations Center
EVAC	Evacuation of US Citizens Abroad (Navy)
FLOGEN	Flow Generator. An Air Force system for generating airlift feasible schedules.
FMX	Files Maintenance Expanded
FORSCOM	US Army Forces Command. The Army organization which commands most of the Army deployable units based in CONUS.
FOS	Full Operational Status (Navy)
FRG	Force Requirements Generator (Air Force)
FRN	Force Requirement Number
FTS	File Transfer Service (WIN)
FY	Fiscal Year
FYDP	Five Year Defense Plan
GADS	Geographic and Alphanumeric Display System (Navy)
GBL	US Government Bill of Lading, (Standard Form 1103). A document used as a contract between the Government and a commercial carrier for transportation.
GBLOC	Government Bill of Lading Office Code
HF	High Frequency

HHT	Hand Held Terminal
HNS	Host Nation Support (OSD)
HQ	Headquarters
IAF	Interactive Application Facility
ICEPLOT	File of North Atlantic Icebergs with Predicted Movements (Coast Guard)
IIP	International Ice Patrol
IMAPS	Integrated Military Airlift Planning System. An Air Force system of FLOGEN and REPGEN for developing and reporting airlift feasible movements.
IMCO	Inter-Governmental Maritime Consultative Organization
IMP	Interface Message Processor
INCONREP	Intra-CONUS Movement Report. An Army report of cargo movements in CONUS.
INMARSAT	International Maritime Satellite
I/O	Input/Output
ISP	Indexed Sequential Processing
ITO	Installation Transportation Office. An organization located on an Army installation that arranges for commercial transportation support.
ITOPS	Interim Terminal Overseas Processing System (Air Force)
JCS	Joint Chiefs of Staff
JDA	Joint Deployment Agency
JDC	Joint Deployment Community
JDS	Joint Deployment System
JDSSC	Joint Data Systems Support Center (DCA)

JOPES	Joint Operation Planning and Execution System
JOPS	Joint Operation Planning System
JSCP	Joint Strategic Capabilities Plan
LAN	Local Area Network
LFF	Logistics Factors File
LOC	Lines of Communication
LOGMOD	Logistics Module (Air Force). A module of COMPES. LOGMOD-M is for use at the major command level. LOGMOD-B is for use at the base level.
LOGNET	Logistics Data Network. An automated system being developed by Department of Army to quickly determine major equipment shortages in deploying units.
LRCSS	Logistics Resource Control and Support System (Air Force)
MAB	Marine Amphibious Brigade
MAC	Military Airlift Command
MACE	Military Airlift Capability Estimator (Air Force)
MACIMS	Military Airlift Command Information Management System (Air Force)
MAIRS	Military Air Integrated Reporting System (Air Force)
MAJCOM	Major Command (Air Force)
MANPER	Manpower and Personnel Module (Air Force). An imbedded program in the Manpower Management system. MANPER-M is for use at the major command level. MANPER-B is for use at the base level.
MAPS	Mobility and Analysis Planning System. A system maintained by MTMC for deliberate planning of OPLAN movements.
MARAD	US Maritime Administration
MC	Monitoring Centers (DCA)

MCLB	Marine Corps Logistics Base
MCO	Marine Corps Order
MENS	Mission Elements Needs Statement
MERCAST	Merchant Ship Broadcast System (To Be Replaced by MERCOMMS) (Navy)
MERCOMMS	Allied Merchant Ship Communications System (Navy)
MERCS	Merchant Ship Crypto System (Navy)
METS	Mechanized Export Traffic System
MILDET	Military Detachment
MILNET	Military Network
MINET	Movement Information Network
MLS	Multi Level Security
MM	Mobilization Management system (Army)
MOBEX	Mobilization Exercise
MOBSCOPE	Mobilization Shipments Configured for Operational Planning and Execution. A system being developed by MTMC to enhance cargo movement schedules.
MODES	Mode Optimization and Delivery Estimation System. A module of the JDS for estimating transportation feasibility.
MPP	Medical Planning Program
MRG	Movement Requirements Generator
MRM	Mobilization Readiness Management System (Army)
MSC	Military Sealift Command
MTMC	Military Traffic Management Command. The transportation operating agency which arranges surface transportation support in the United States and operates common user ocean terminals.

MTMCEA	Military Traffic Management Command, Eastern Area. A subordinate headquarters of the Military Traffic Management Command located in Bayonne, New Jersey.
NATO	North Atlantic Treaty Organization
NAVCAMS	Naval Communications Area Master Station
NAVCOMMSTA	US Naval Communications Station
NAVEDTRA	Naval Education and Training
NCAPS	Naval Control and Protection of Shipping
NCS	Naval Control of Shipping
NCSLO	Naval Control of Shipping Liaison Officer
NCSO	Naval Control of Shipping Officer
NCSORG	Naval Control of Shipping Organization
NMCC	National Military Command Center
NPS	No-Plan System
NRP	Nonunit-Related Personnel
NSA	National Security Agency
NSOF	Navy Status of Forces
NTS	Naval Telecommunication System
OCA	Operational Control Authority (Navy)
ODIN	Operational Digital Network (Coast Guard)
O&M	Operations and Maintenance
OJCS	Organization of the Joint Chiefs of Staff
OPLAN	Operations Plan
OSIS	Ocean Surveillance Information System (Navy)

OTSR	Optimum Track Ship Routing (Navy)
PACAF	Pacific Air Force
PACE	A small hand held microprocessor controlled shipboard offline crypto terminal. (NOTE: PACE is not an acronym.)
PACS	Passenger Automated Check-in System (Air Force)
PBEIST	Planning Board for European Inland Surface Transport (NATO)
PBOS	Planning Board for Ocean Shipping (NATO)
PE	Program Element
POD	Port of Debarkation
POE	Port of Embarkation
POL	Petroleum, Oil, and Lubricants
POM	Program Objectives Memorandum
POMCUS	Prepositioned Organizational Materiel Configured in Unit Sets
PORTS	Port Characterisitcs File
PRAMS	Passenger Reservation and Manifesting System (Air Force)
PRC	Passenger Reservation Center (Air Force)
PWRMR	Pre-positioned War Reserve Material Requirements (A module of SEASTRAT) (Navy)
QTY	Quantity
RACE	Rapid Automatic Cryptographic Equipment (Navy)
R&D	Research and Development
RAF	Remote Access Facility (Army)
RDC	Regional Data Center (Army)
RDJTF	Rapid Deployment Joint Task Force (Now USCENTCOM)

REPGEN	Reports Generator (A module in the Air Force IMAPS)
REPTOF	Reporting Officer (Navy)
ROC	Required Operational Capability
ROS	Reduced Operational Status (Navy)
RPC	Regional processing Center (Army)
RRF	Ready Reserve Fleet (Navy)
RUP	Remote Users Package, a communications program in WIN
SAIL	Statistical Analysis for Improving Lift. A module of SEASTRAT (Navy)
SAR	Search and Rescue
SCCN	Secure Command and Control Network (Coast Guard)
SCP	System Change Plan
SEACOP	Strategic Sealift Contingency Planning. A system maintained by MSC for deliberate planning in the JDS. (Navy)
SEASTRAT	Sealift Strategic Planning Subsystem. A system being developed by MSC for electronic interface with the JDS. (Navy)
SELSCAN	Selective Scanning (now ACP) (Air Force)
SEMS	Standard Embarkation Management System. A system used by Marine Corps units to assist in planning embarkation and deployments.
SID	Sealift Information Data Base. Data input to SEASTRAT. (Navy)
SITOR	Simplex Teletype Over Radio (Navy)
SM	System Monitor
SOLAS	Safety of Life at Sea
SPRS	Single Passenger Reservation System (Air Force)

SPUR	System for Predetermining Operational Unit Requirements. A system maintained by MTMC to develop transportation feasible unit deployment plans.
SRF	Summary Reference File
STAMMIS	Standard Army Multicommand Management Information System
STRATMOB	Strategic Mobility. A staff office of MSC.
TAC	Tactical Air Command (Air Force)
TAC	Terminal Access Controller
TAMS	Theater Airlift Management System (Air Force)
TC ACCIS	Transportation Coordinator Automated Command and Control Information System. A system being developed by DCA to permit installation level preparation of deployment data bases and movement documentation.
TELEX	Teletype Exchange
TELNET	Telecommunications Net. A communications feature of WIN.
TFE	Transportation Feasibility Estimator
T/I	TPFDD Interface
TIPS	Transportation Information Processing System (Air Force)
TMO	Transportation Management Office. An organization located on a Navy, Air Force or Marine Corps base that arranges for commercial transportation support.
TOAs	Transportation Operating Agencies. MAC, MSC, and MTMC.
TOLS	Terminal On Line System. A system maintained by MTMC to facilitate ocean terminal operations.
TPFDD	Time-Phased Force Deployment Data
TPFDL	Time-Phased Force Deployment List
TPTRL	Time-Phased Transportation Requirements List

TUCHA	Type Unit Data
UFI	User Friendly Interface
UHF	Ultra High Frequency
UNITRACK	Unit Tracking (Navy)
USAF	US Air Force
USAFE	US Air Force, Europe
USAREUR	US Army, Europe
USCG	US Coast Guard
USCENTCOM	US Central Command (Formerly RDJTF)
USCOMEASTLANT	Commander US Naval Forces Eastern Atlantic
USERID	User Identification
USEUCOM	US European Command
USLANTCOM	US Atlantic Command (Navy)
USMER	US Merchant Vessel Locator Filing System (MARAD)
USNAVEUR	US Navy, Europe
USNS	United States Naval Ship
USPACOM	US Pacific Command (Navy)
USREDCOM	US Readiness Command (Air Force)
UTC	Unit Type Code. A code which identifies a unit by organization and equipment.
VAX	Virtual Address Extension
VFDMIS	Vertical Force Development Management Information System (Army)
VIABLE	Vertical Installation Automation Base Line (Army)

VMS	Virtual Memory System
VTS	Vessel Traffic Systems (Coast Guard)
WIN	Worldwide Military Command and Control System Intercomputer Network.
WIS	WWMCCS Information System
WWMCCS	Worldwide Military Command and Control System

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